ᑐᓐᓂᕆᔭᐅᔪᖅ ᑖᒃᑯᓄᖓ

ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᔭᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ

ᐆᒧᖓ

ᑐᑭᓯᒋᐊᕈᑎᔅᓴᖅ: X

ᐋᖅᑭᒋᐊᒐᔅᓴᖅ:

ᐃᓱᒪᒋᔭᔅᓴᖅ: ᐋᖅᑭᒋᐊᕆᔭᔪᑏᑦ ᐅᓪᓗᒥ ᐊᑐᖅᑐᒧᑦ ᑲᑎᓕᒫᖅᓱᒋᑦ ᐱᔭᐅᔪᓐᓇᖅᑐᑦ ᐊᖑᓇᓱᒃᑎᓄᑦ ᑭᒡᓕᖏᑦ ᕿᑭᖅᑖᔫᑉ ᐃᒪᕕᐊᑕ ᑐᒡᓕᑦ ᕿᓚᓗᒐᖏᓄᑦ ᐊᒻᒪᓗ ᐊᐅᓱᐃᑦᑑᑉ ᑲᖏᖅᓱᖏᓐᓂᒃ ᔭᐅᓐᔅ ᐊᒻᒪᓗ ᓯᒥᑦ ᐃᑭᕋᔅᖏᑦ.

ᓇᑭᓐᖓᓐᓂᖓ:

ᐋᒐᓯ 2013-ᒥ, ᐃᒪᒻᒥᐊᑕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥ (DFO) ᐱᓕᕆᐊᖃᕆᐅᓚᐅᖅᑐᑦ ᐊᐅᔭᐅᑉ ᐃᓗᐊᒍᑦ ᐊᒥᓲᓂᖏᓄᑦ ᖃᖓᑕᓱᒃᑯᑦ ᖃᐅᔨᓵᖃᖅᓱᑎᒃ ᑲᓇᑕᐅᑉ ᑐᒡᓕᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ ᐊᒡᒍᖅᓯᒪᓇᓱᒋᔭᑦ ᐊᕝᕕᓂᓐᓄᑦ ᖁᑦᑎᒃᑑᑉ ᐅᑭᐅᖅᑕᖅᑐᐊᓂ: ᑰᒐᓇᔫᑉ ᕿᑭᖅᑕᖓᑕ ᕿᓚᓗᒐᖏᑦ, ᐃᑉᐱᐊᔭᔫᑉ ᑲᖏᖅᓱᐋᓗᐊ ᕿᓚᓗᒐᖏᑦ, ᑕᓯᐅᔭᐅᑉ ᑕᕆᐅᖓ ᕿᓚᓗᒐᖏᑦ, ᑲᓇᓐᓇᐅᑉ ᕿᑭᖅᑖᔫᑉ ᕿᓚᓗᒐᖏᑦ ᐃᓚᐅᔪᑦ ᕿᑭᖅᑖᔫᐃ ᐃᒪᕕᐊᑕ ᕿᓚᓗᒐᖏᑦᑎᖏᓐᓂᒃ; ᐊᒻᒪᓗ ᔪᓐᔅ ᐊᒻᒪᓗ ᓯᒥᑦ ᐃᑭᕋᔅᖏᑦ ᖃᓂᒋᔭᓂ ᓄᓇᓕᐊᑕ ᐊᐅᓱᐃᑦᑑᑉ. ᐃᒪᒻᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓵᖅᑎᖏᑦ ᐊᑐᓚᐅᖅᑐᑦ ᖃᐅᔨᓵᒻᒥᑕ ᓴᖅᑭᑎᖅᑕᖏᓐᓂᒃ ᓇᓚᐅᑦᑖᕆᔭᑎᒋᓪᓗᒍ ᐊᒥᓲᓂᖏᓄᑦ ᑐᒡᓖᑦ ᕿᓚᓗᒐᖏᑦ ᓇᓗᓇᐃᕋᓱᒃᑐᒍᓗ ᑲᑎᓕᒫᖅᑐᑦ ᐱᔪᓐᓇᖅᑕᑦ ᓄᓈᑕᓄᑦ ᐊᖑᓂᒃᑕᑦ (TALC) (ᑕᑯᔭᓴᖅ 1) ᐊᑐᓕᖁᔨᔪᑎᖃᖅᑐᑎᒃ ᐊᑐᓂᑦ ᕿᓚᓗᒐᑦ ᐊᒡᒍᖅᓯᒪᓂᖏᓄᑦ. ᑖᓐᓇ ᑐᑭᓯᐅᒪᔪᑎᓴᖅ ᓯᕗᓪᓕᖅᐸᒥᒃ ᐅᓂᒃᑳᕆᔭᐅᓪᓗᓂ ᒫᔭᐃ 2015 ᑲᑎᒪᓂᐊᒍᑦ ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓄᑦ (NWMB) ᐅᑭᐅᖅᓯᐅᑎᐊᒍᑦ ᑐᓴᐅᒪᑎᑦᑎᔨᓄᑦ ᐱᕙᓪᓕᐊᔪᓕᕆᔨᓄᑦ ᑐᓂᔭᐅᓲᑉ ᑭᖑᓪᓕᖅᐹᒥᒃ ᐅᖃᐅᔭᔨᖅᓱᑎᖓᓂᒃ ᓇᔅᓯᐅᔭᔨᓪᓗᑎᒃ ᑖᒃᑯᓄᖓ ᓄᓇᕗᑦ ᑐᓐᖓᕕᒃ ᑎᒥᖓᑦ (NTI) ᐊᒻᒪᓗ ᐃᖅᑲᓇᐃᔭᖅᑎᖏᓄᑦ ᐅᒃᑐᕙ 2015-ᒥ. ᑭᖑᓪᓕᖅᐹᖅ ᐅᖃᐅᓯᔭᔨᖅᓱᑎᖓ ᑎᑎᕋᐅᓯᐅᓕᖅᑐᓂ ᑎᓯᐱᕆ 2015-ᒥ (ᑕᖅᓴᓕᒃ1: CSAS – SAR 2015/046).

ᑕᑯᔭᐃᓐᓇᕆᓪᓗᒋᑦ, ᑖᓐᓇ 2013 ᐊᒥᓲᓂᖏᓄᑦ ᓇᓚᐅᑦᑖᒐᖓᓐ ᑲᓇᑕᐅᑉ ᖁᑦᑎᒃᑐᒻᒥ ᕿᓚᓗᒐᖏᓄᑦ ᐅᖓᑕᐅᔭᔨᔪᖅ ᓯᕗᓂᐊᒍᑦ ᓇᓚᐅᑦᑖᕆᔭᐅᓯᒪᔪᓂᒃ (141,909). ᑭᓯᐊᓂᓕ, ᓄᑖᖑᔪᑦ ᐊᒥᓲᓂᖏᓄᑦ ᓇᓚᐅᑦᑖᒐᖏᑦ ᑖᔅᓱᒧᖓ ᑕᓯᐅᔭᐅᑉ ᑕᕆᐅᖓᑕ ᕿᓚᓗᒐᖏᓄᑦ ᕿᑎᓪᓗᐊᑐᐃᓐᓇᖓᓄᑦ ᑎᑭᐅᑎᔪᖅ ᑭᖑᓪᓕᖅᐹᒥᒃ ᓇᓚᐅᑦᑖᕈᑎᕕᓈᓂᒃ ᐊᕐᕌᒍᐊᒍᑦ 2004 (20,200 ᐅᕗᖓ 10,500). ᐃᒡᓗᖕᒐᖓᒍᑦ, ᓄᑖᖑᔪᑦ ᐊᒥᓲᓂᖏᓄᑦ ᓇᓚᐅᑦᑖᕈᑎᑦ ᓴᓂᕋᓃᑦᑐᓄᑦ ᐃᑉᐱᐊᔭᔫᑉ ᑲᖏᖅᓱᐋᓗᐊᓂ ᕿᓚᓗᒐᖏᑦ ᒪᕿᐃᖅᓱᓪᓗᐊᖅᓱᑎᒃ ᐊᒥᓲᓂᖏᑦ ᓇᓚᐅᑦᑖᕆᔭᐅᓯᒪᓕᖅᑐᑦ ᓯᕗᓂᐊᒍᑦ ᓇᓚᐅᑦᑖᒐᓂᒃ ᐊᕐᕌᒍᐊᒍᑦ 2010 (18,100 ᑎᑭᑦᑐᖅ 35,000). ᐃᓱᒪᒋᔭᐅᔪᒃᑯᑦ ᐱᔭᔪᑎᒋᔭᐅᓇᓱᒋᔭᕗᑦ ᐊᔾᔨᒌᖏᔭᔪᑎᖏᓐᓄᑦ ᖃᐅᔨᓵᑉ ᓇᓚᐅᑦᑖᕈᑎᖏᓄᑦ ᐊᑯᓐᓂᖏᒍᑦ ᑕᓯᐅᔭᐅᑉ ᑕᕆᐅᖓᑕ ᐃᑉᐱᐊᔭᔫᑉ ᑲᖏᖅᓱᐋᓗᐊᑦᑕᓗ ᐃᓚᖃᖅᑐᖅ ᖃᐅᔨᓴᐃᔭᔪᑎᐅᑉ ᓇᓗᓇᕈᑎᖏᓐᓄᑦ, ᐊᓯᔾᔨᓐᓂᖏᓄᑦ ᕿᓚᓗᒐᑦ ᓇᔪᖅᑕᖏᓂᒃ ᑕᕆᐅᒥᒃ, ᐊᒻᒪᓘᓐᓃᑦ ᑖᒃᑯᐊ ᕿᓚᓗᒐᐃᑦ ᐅᑎᖅᑕᕋᒻᒪᑕ ᓇᓖᕋᑲᑕᒃᓱᑎᒃ. ᑐᒡᓖᑦ ᕿᓚᓗᒐᑦ ᑎᒃᑯᐊᖅᑕᐅᓯᒪᔪᑦ ᐊᔾᔨᐅᖏᑦᑐᒥᒃ ᐃᓱᒫᓗᓐᓇᖅᑐᑦ ᑲᑎᒪᔨᕋᓛᖏᓐᓄᑦ ᐃᓕᖅᑯᓯᓄᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᓕᖅᑐᓄᑦ ᓂᔾᔪᑎᓄᑦ ᑲᓇᑕᒥ (COSEWIC). ᑎᑎᖅᑕᐅᓯᒪᒻᒥᔪᑦ ᐃᓗᐊᒍᑦ ᐅᐃᒍᖓᑦ II ᐊᖏᖅᑲᑎᑏᒍᑎ ᓄᓇᔪᐊᒻᒥ ᑕᐅᖅᓱᖅᑲᑎᑏᓐᓂᒻᒧᑦ ᐅᓗᕆᐊᓇᖅᑐᒦᑦᑐᓄᑦ ᐆᒪᔪᓄᑦ ᐱᕈᖅᑐᓂᒃ ᓂᔾᔪᑎᓂᓪᓗ (CITES) ᐊᒻᒪᓗ ᖃᐅᔨᔭᒧᑦ ᐅᓗᕆᐊᓇᖏᑦᑐᒥᒃ ᓴᖅᑭᑦᑐᒧᑦ (NDF) ᑖᒃᑯᓇᖓᑦ ᐃᒪᒻᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᖅᑎᖏᑕ ᐊᖏᖅᑎᖏᓄᑦ ᐱᔭᕆᐊᖃᒻᒪᑦ ᑎᒍᓯᓇᓱᓪᓗᓂ CITES ᓯᑕᑎᒧᑦ/ᐊᒡᒍᖅᓯᒪᔪᓂᑦ ᑲᓇᑕᐅᑉ ᓯᑕᑖᓄᑦ ᐱᔪᓐᓇᐅᑎᒥᒃ ᓄᓇᔪᐊᒻᒥ ᑕᐅᖅᓱᖅᑲᑎᑏᒍᑎᖏᓄᑦ ᑐᒡᖏᓄᑦ ᕿᓚᓗᒐᑦ ᑲᓇᑕᒥ. ᐅᓪᓗᒥ ᓇᐸᖓᔪᒥᒃ ᐱᐅᓕᐊᖃᖅᑐᒥᒃ ᐱᑕᓕᒃ NDF ᑕᒪᐃᓐᓄᑦ ᑐᒡᓕᓐᓄᑦ ᕿᓚᓗᒐᓄᑦ ᓇᔪᖅᑐᑦ ᑕᕆᐅᖏᓐᓂᒃ ᑲᓇᑕᐅᑉ.

ᑐᓐᖓᕕᖃᖅᑐᑕ ᐊᖅᐸᓯᓐᓂᖅᓴᒥᒃ 2013 ᐊᒥᓲᓂᖏᓄᑦ ᓇᓚᐅᑦᑖᕈᑎᒥᒃ ᑖᒃᑯᓄᖓ ᑕᓯᐅᔭᐅᑉ ᑕᕆᐅᖓᑕ ᑐᒡᓕᑦ ᕿᓚᓗᒐᖏᓄᑦ, ᓇᐸᖓᔪᖅ ᑲᑎᓕᒫᖅᑐᑦ ᐊᔪᓐᓇᖏᑦᑕᑦ ᐊᖑᓂᓴᓴᑦ (TAH) ᓇᐃᓴᐅᑖ 236 ᐊᖅᐸᓯᕆᐊᕆᐊᓕᒃ ᑕᑲᓄᖓ ᓇᐃᓴᐅᑎᒧᑦ 134, ᒪᓕᓕᓪᓗᓂ ᓄᑖᖑᔪᑦ TALC ᐅᖃᐅᔨᔨᖅᓱᑎᐊᓄᑦ, ᑖᒃᑯᓄᖓ ᐃᒪᒻᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᖅᑎᖏᑕ ᐊᖏᖅᑎᖏᓄᑦ ᓴᖅᑮᔪᒪᓪᓗᑎᒃ ᐱᐅᓕᐊᖃᖅᑐᒥᒃ NDF ᓇᓂᓯᔭᔪᑖᓂᒃ ᕿᓚᓗᒐᖏᓐᓄᑦ ᑕᐃᒫᓪᓗ ᑲᔪᓯᑎᑦᑎᓪᓗᑎᒃ ᐊᔪᓐᖏᓐᓂᖏᑕ ᐃᓄᖏᑦ ᒥᑦᑎᒪᑕᓕᐅᑉ ᓇᔅᓯᐅᑎᔪᓐᓇᓪᓗᒋᑦ ᑐᒡᖏᑦ ᕿᓚᓗᒐᖅᑕᖏᑕ ᓄᓇᔭᔪᐊᓕᒫᒧᑦ.

ᑕᑯᔾᓴᖅ 1. 2013-ᒥ ᖃᐅᔨᓴᐃᓂᒻᒧᑦ ᑕᑯᓴᕈᖅᑐᑦ ᐱᖃᓯᐅᑎᓪᓗᒋᑦ ᕿᓚᓗᒐᑦ ᐊᒥᓲᓂᖏᓄᑦ ᓇᓚᐃᑦᑖᒐᖏᑦ, ᓴᖅᑭᑦᑐᓐᓇᖅᑐᑦ ᐆᒪᔪᖏᓂᒃ ᐃᓚᓐᖓᑎᕈᑎᖏᑕ (PBR), ᐊᒻᒪᓗ ᑲᑎᓕᒫᖅᑐᑦ ᐊᔪᓐᖏᑕᑦ ᓄᓈᖅᑕᓂᒃ ᐱᔭᕆᔭᑦ (TALC) ᑖᔅᓱᒪᓐᖓᑦ 2013 ᖃᖓᑕᓱᒃᑯᑦ ᖃᐅᔨᓴᕈᑖᓂᒃ ᐊᒻᒪᓗ ᓄᑖᖑᓛᓂᒃ ᓇᓚᐅᑦᑖᕈᑎᓂᒃ ᐅᓪᓗᒥᒧᖓᔪᓂᓪᓗ ᐊᑐᖅᑐᓂᒃ TALC.

ᑐᒐᓛᑦ ᕿᓚᓗᒐᖏᑦ	ᓯᕗᓂᐊᒍᑦ ᐊᒥᓲᓂᕕᓂᖏᑦ (ᐊᕐᕌᒍ)	ᐅᓪᓗᒥ TAH	2013 ᐊᒥᓲᓂᕆᔭᖏᑦ	2013 PBR	2013 TALC
ᑰᒐᓇᔫᑉ ᕿᑭᖅᑕᖓ	~52,000 (1996)	532	49,768	842	**658**
ᐃᑉ ᐱᐊᔾᔪᑉ ᑲᖏᖅᓱᐋᓗᐊ	~18,000 (2010)	233	35,043	498	**389**
ᑕᓯᐅᔭᐅᑉ ᑕᕆᐅᖓ	~20,000 (2004)	236	10,489	171	**134**
ᑲᓇᓐᓇᖅ ᕿᑭᖅᑖᓗᒻᒥ	~10,000 (2003)	122	17,555	264	**206**
ᔭᐅᓐᓴ ᐃᑭᕋᓴᖓ	ᐊᑐᖏᑦᑐᖅ	50	12,694	97	**76**
ᓯᒥᑦ ᐃᑭᕋᓴᖓ	ᐊᑐᖏᑦᑐᖅ		16,360	99	**77**

ᐅᑐᕙ 30 2015-ᒥ, ᑭᒡᒐᖅᑐᐃᔨᖏᑦ ᑐᓐᖓᕕᒃᑯᓐᓂᑦ, ᓄᓇᕗᒥ ᐆᒪᔪᓕᕆᔨᔾᔪᐊᒃᑯᓐᓂᑦ ᐊᒻᒪᓗ ᐃᒪᒻᒥᐅᑕᓕᕆᔨᒃᑯᓐᓂᑦ ᑲᑎᒪᖅᑲᑎᑏᑕᐅᖅᑐᑦ ᑕᓚᕗᒃᑯᑦ ᐅᖃᐅᓯᖅᑲᕋᓱᒃᓗᑎᒃ ᓯᕗᒧᑦ ᑲᔪᓯᓂᐊᓐᓂᖏᓄᑦ ᐊᐅᓚᑦᑎᔨᑦ ᑭᒡᒍᑎᔅᓴᖏᓄᑦ ᓴᖅᑮᓇᓱᓐᓂᒻᒥᒃ ᑖᒃᑯᓄᖓ ᓄᑖᓄᑦ 2013 ᑐᒐᓕᑦ ᕿᓚᓗᒐᖏᑕ ᐊᒥᓲᓂᖏᓄᑦ. ᑕᐃᒪᓕ ᑕᑯᔾᐃᓐᓇᓇᓪᓗᒋᑦ ᐊᖏᖅᑲᑎᑏᐸᓗᑎᖅᑲᖅᓗᑎᒃ ᓴᖅᑭᒋᐊᒥᒃ ᐱᒋᐊᕈᑎᒥᒃ ᑐᑭᒧᐊᓇᔨᑦ ᑲᑎᒪᔨᕋᓛᖓᓂᒃ ᑭᒡᒍᖅᑐᐃᔨᖅᑲᓪᓗᑎᒃ ᑎᒥᖏᓐᓂᒃ ᑖᒃᑯᐊ ᑐᓐᖓᕕᒃᑯᑦ, ᓄᓇᕗᒥ ᐆᒪᔪᓕᕆᔨᔾᔪᐊᒃᑯᑦ ᐊᒻᒪᓗ ᐃᒪᒻᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᐱᒋᐊᓪᓗᒋᑦ ᓴᓇᔭᐅᓂᖏᑦ ᕿᒥᕐᕈᔭᐅᓂᖏᑦ ᐊᔾᔨᒌᖏᑦᑐᑦ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐃᓱᒪᓕᐅᕆᔾᔪᑎᔅᓴᑦ ᐊᑐᓕᖅᑎᑦᑎᓂᒻᒧᑦ ᓄᑖᖑᔪᓂᒃ ᖃᐅᔨᓴᖅᑏᑦ ᑐᑭᓯᐅᒪᔾᔪᑎᒋᔭᖏᓂᒃ ᐊᒻᒪᓗ ᓴᖅᑮᓂᒻᒧᑦ ᑐᓴᕋᓱᐊᓐᓂᒻᒧᑦ ᐸᓐᓇᐅᑎᐅᔪᒥᒃ ᐊᒃᑐᖅᑕᐅᔪᓄᑦ ᐃᓄᓐᓄᑦ - ᐃᓱᐊᒍᑦ ᑖᓐᓇ ᐆᒃᑐᕋᐅᑎᒧᑦ ᓴᖅᑮᒐᔭᖅᓱᓂ ᓵᖓᓄᑦ ᐃᓕᔭᐅᔪᓴᖅ ᓄᓇᕗᒥ ᐆᒪᔪᓕᕆᔨᔾᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓄᑦ ᕿᒥᕐᕈᔭᐅᓂᐊᓪᓗᓂ ᒪᓕᓪᓗᒍ ᐊᖏᖅᑲᑎᑏᒍᑎᒻᒪᕆᒃ NLCA ᐊᖅᑭᔅᓱᐃᔾᔪᑖᓄᑦ ᐊᐅᓚᓂᕆᓕᐊᖓᒍᑦ. ᑕᐃᒪᐃᓐᓂᐊᓄᑦ, ᓵᓄᐊᕆ 20 ᐊᒻᒪᓗ 21, 2016 ᑐᒧᐊᕆᔨᑦ ᑲᑎᒪᔨᕋᓛᖏᑦ ᑲᑎᒪᓂᖅᑲᖅᓗᑎᒃ ᐊᑐᕈᒪᔭᒥᓄᑦ ᓯᕗᓂᒻᒥ ᐸᓐᓇᐃᔾᔪᑎᓄᑦ ᓴᖅᑮᓂᒻᒧᑦ ᕿᒥᕐᕈᐃᓂᒻᒧᓪᓗ ᐃᓚᖏᓂᒃ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐃᓱᒪᓕᐊᕆᔭᓴᖏᑕ, ᐱᖃᓯᐅᑎᓗᒍ ᑲᑐᔾᔨᖅᑲᑎᖅᑲᕋᓱᐊᓐᓂᒻᒥᒃ ᐸᓐᓇᐅᑎᐊ ᑐᓴᕋᓱᐊᕈᑎᒧᑦ ᓄᓇᓕᓐᓂᒥᐅᖑᔪᓄᑦ.

ᑐᕌᕆᔭᖓ ᐆᒪᐅᑉ ᑐᑭᓯᑎᑦᑎᔪᑎᐅᑉ ᐅᓂᒃᑳᑉ ᐅᖃᐅᔨᔨᖅᓱᐃᓇᓱᓐᓂᖅ ᓄᓇᕗᒥ ᐆᒪᔪᓕᕆᔨᔾᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓂᒃ ᑐᑭᒧᐊᕆᔨᑦ ᑲᑎᒪᔨᕋᓛᑦ ᐊᑐᕈᒪᔭᖓᓐᓂᒃ ᑐᓴᕋᓱᐊᓐᓂᒻᒧᑦ ᐸᓐᓇᐅᑎᖓᓂᒃ ᐊᒻᒪᓗ ᐅᓪᓗᕐᑯᑎᔅᓴᑦ ᓂᕈᐊᕆᔭᖏᑕ ᐊᒃᑐᐊᓂᖅᑲᖅᑐᑦ ᐱᔪᒪᓂᒻᒧᑦ ᐊᖅᑮᕐᑯᔭᒥᓂᒃ. ᐊᖏᖅᑲᑎᑏᔅᓯᒪᔪᑦ ᑐᒐᓛᑦ ᑐᑭᒧᐊᕆᔨᑦ ᑲᑎᒪᔨᕋᓛᖏᑦ ᑲᑐᔾᔨᖅᑲᑎᖅᑲᓪᓗᑎᒃ ᑐᓴᕋᓱᐊᓪᓗᑎᒃ ᐃᓄᓐᓂᒃ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐃᓱᒪᓕᐅᕈᑎᔅᓴᓄᑦ, ᑲᑐᔾᔭᐅᓪᓗᑎᒃ ᓴᖅᑭᑕᐅᓂᑯᑦ ᐊᑐᕋᔅᓴᓄᑦ ᐸᓐᓇᑦᑎᓪᓗᑕ ᑲᑎᒪᓂᒃᑯᑦ, ᐊᑐᓕᖅᑎᑦᑎᓂᒻᒧᑦ ᓄᑖᓂᒃ ᖃᐅᔨᓴᖅᑎᒃᑯᑦ ᐅᖃᐅᔨᔨᖅᓱᑎᖏᓐᓂᒃ ᕿᓚᓗᒐᕋᓱᐊᓐᓂᒻᒧᑦ. ᑖᓐᓇ ᑐᓴᕋᓱᐊᓐᓂᖅ ᒪᕿᐃᓕᖓᔪᓂᒃ ᐃᓗᓕᖅᑲᖅᑐᖅ: (1) ᐅᐸᓪᓚᓇᓪᓗᑎᑦ ᑐᓴᕋᓱᐊᓐᓃᑦ ᓄᓇᓕᖏᓐᓄᑦ ᐃᐸᐱᐊᔾᔪᒃ, ᒥᑦᑎᒪᑕᓕᒃ, ᑲᖏᖅᑐᒐᐱᒃ ᐊᒻᒪᓗ ᕿᑭᖅᑕᔾᔪᐊᖅ ᐃᐳᕈ 2016-ᒥ; ᐊᒻᒪ (2) ᑎᑎᖅᑲᑎᒍᑦ ᑐᓴᕋᓱᐊᓐᓃᑦ ᐊᒥᐊᒃᑯᔪᓄᑦ ᓄᓇᓕᐅᔪᓄᑦ ᕿᓚᓗᒐᕋᓱᓲᑦ ᕿᓚᓗᒐᖏᓐᓂᒃ ᕿᑭᖅᑖᓘᑉ ᐃᒪᕕᐊᓂᒃ, ᔪᓐᓴ ᐊᒻᒪᓗ ᓯᒥᑦ ᐃᑭᕋᓴᖏᑕ ᕿᓚᓗᒐᖏᓐᓂᒃ. ᕿᑎᒻᒥᐅᑦ ᐊᒻᒪᓗ ᕿᑭᖅᑖᓗᒃ ᐆᒪᔪᓕᕆᔨᔾᔪᐊᖏᑕ ᑲᑎᒪᔨᖏᑦ ᑐᓴᕋᓱᐊᕝᕕᐅᒐᔭᒥᔪᑦ ᓇᓗᓇᐃᖅᓯᒪᔪᑦ ᒪᓕᒃᑯᑦ.

ᑭᖑᓂᐊᒍᑦ ᑐᓴᕋᓱᐊᓐᓂᕆᔪᒪᔭᑦᑕ, ᐃᒪᒻᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᐅᓂᒃᑳᕆᔭᖃᓪᓗᑎᒃ ᑐᓴᖅᑕᒥᑕ ᐃᓗᓕᕆᔭᖏᓐᓂᒃ ᐃᓗᐊᒍᑦ ᐱᔪᒪᓂᐅᑉ ᐊᖅᑮᕐᑯᔨᓂᒻᒧᑦ ᑲᑎᓐᖓᔭᐅᔪᓂᒃ ᑐᓂᔭᐅᓛᖅᑐᖅ ᐅᓂᒃᑳᕆᔭᐅᓗᓂᓗ ᓄᓇᕗᒥ ᐆᒪᔪᓕᕆᔨᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖏᓐᓄᑦ ᑲᑎᒪᓂᕆᓲᖏᒍᑦ ᐅᐱᓐᖓᒃᑯᑦ ᔪᓂ 2016-ᒥ. ᑖᓐᓇ ᐱᔪᒪᓂᐅᑉ ᐊᖅᑮᕐᑯᔨᓂᒻᒧᑦ ᐊᓯᔾᔨᕐᑯᔨᔪᖅ ᐅᓪᓗᒥ ᐊᖅᑭᒃᑕᐅᓯᒪᔪᓄᑦ ᑭᒡᓕᓕᐊᓄᑦ TAH ᕿᑭᖅᑖᔫᐃ ᐃᒪᕕᐊᓄᑦ ᐊᒻᒪᓗ ᔪᓐᓴ ᓯᒥᑦ ᐃᑭᕋᓴᖏᓐᓄᑦ ᑐᒫᓖᑦ ᕿᓚᓗᒐᖏᑦ ᐊᐅᓚᑕᐅᔾᔪᓯᖏᓄᑦ ᐊᒡᒍᖅᓯᒪᓃᑦ ᑐᓐᖓᕕᒋᓪᓗᒍ 2013 ᖃᐅᔨᓴᖏᒍᑦ ᓴᖅᑭᓯᒪᔪᑦ ᑐᓴᖅᑕᑦᑕᓗ ᓄᓇᓕᐅᔪᓂᒃ ᑎᒥᐅᔪᓂᓪᓗ. ᒪᓕᒃᑐᒋᑦ ᐅᓪᓗᕐᑯᑎᓕᐊᖏᑦ, ᑎᑭᓐᓇᓱᐊᖅᑕᕗᑦ ᑭᖑᓪᓕᖅᐸᒥᒃ ᐊᖅᑮᔭᖓᑦ ᐊᖏᖅᑕᐅᓗᓂ ᐃᒪᒻᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᒥᓂᔅᑕᖓᓄᑦ ᐊᑐᓕᕈᓐᓇᖅᓯᓗᓂ ᓯᕗᓂᐊᒍᑦ 2017 ᕿᓚᓗᒐᕋᓱᓐᓈᑕ. ᖃᒃᑲᓐᓂᐊᒍᑦ, ᐃᒪᒻᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᑎᑦᑎᓂᐊᒻᒥᔪᑦ ᕿᓚᓗᒐᖅᑕᐅᔪᓐᓇᖅᑐᓄᑦ ᐊᒡᒍᖅᑑᑎᔅᓴᖏᓄᑦ ᓵᓄᐊᕆ 2017-ᒥ, ᓱᓪᓗᓕ ᐊᑐᓚᐅᖅᑕᑦᑎᑐᑦ ᓈᕗᐊᕆ 2013-ᒥ.

ᐅᐃᒍᖏ:

ᑕᖅᓴᓕᒃ 1: DFO. 2015. ᐊᒥᓲᓂᖏᓄᑦ ᓇᓚᐅᑦᑖᕈᑎᑦ ᑐᒫᓕᑦ ᕿᓚᓗᒐᖏᓄᑦ ᑲᓇᑕᐅᑉ ᖁᑦᑎᒃᑐᐊᑕ ᐅᑭᐅᖅᑕᖅᑐᐊᓂ ᐊᕐᕌᒍᐊᒍᑦ 2013. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2015/046.

ᑐᓴᕋᓱᐊᕝᕕᕗᑦ: ᓄᓇᕗᑦ ᑐᓐᖓᕕᒃ – ᐹᓪ ᐃᓐᖓᐅᑦ
ᐆᒪᔪᓕᕆᔨᔪᐊᒃᑯᑦ – ᑕᓂᒃᑲ ᑯᕆᔅᑐᓪ ᐊᒻᒪ ᔭᐃᓴᓐ ᐊᕿᐊᕈᖅ

ᐸᓐᓇᒃᑕᐅᔪᖅ: ᐃᒪᒻᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᓱᓇᒃᑯᑖᓂᒃ ᐊᐅᓚᑦᑎᔨᖏᑦ - ᕿᑎᐊᓄᑦ ᐅᑭᐅᖅᑕᖅᑑᓪᓗ ᓄᓇᖏᓄᑦ

ᐅᓪᓗᖓ: ᓈᕗᐊᕆ 3, 2016

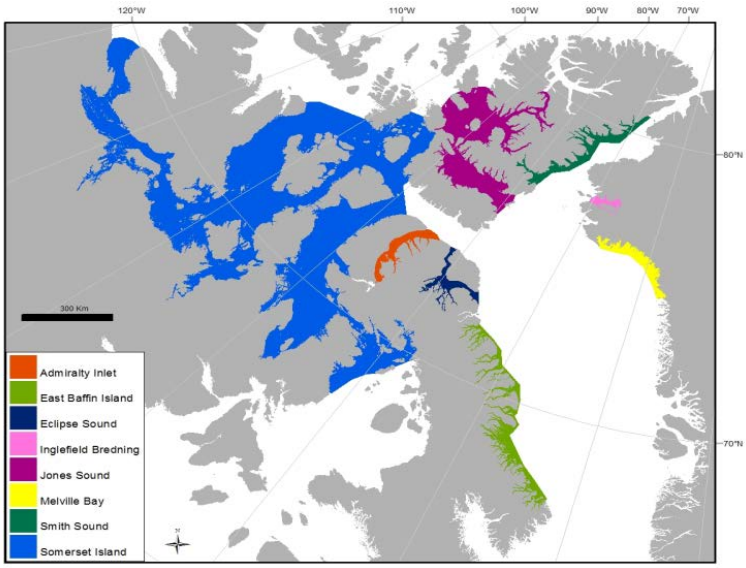
Fisheries and Oceans Canada | Pêches et Océans Canada
Ecosystems and Oceans Science | Sciences des écosystèmes et des océans

ᕿᑎᖅᐸᓯᐊᓂ ᐊᒻᒪ ᐅᑭᐅᖅᑕᖅᑑᓂᕐᒥ
ᐊᕕᒃᑐᖅᓯᒪᓂᕐᒥ

ᑲᓇᑕᒥᐅᑦ ᖃᐅᔨᓴᖅᑏᑦ ᐅᖃᐅᔾᔨᒋᐊᖅᑎᖕᒋᑦ
ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᓂᒃ ᐅᖃᐅᔾᔨᒋᐊᕈᑕᐅᓂᕐᒧᑦ ᐅᓂᒃᑳᓕᐊᑦ **2015/046**

ᐊᒥᓲᑎᒋᓂᖕᒋᓂᒃ ᕿᓚᓗᒐᐃᑦ ᑐᒐᓖᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᑦ ᑲᓇᑕᐅᑉ ᐅᑭᐅᖅᑕᖅᑑᓂᖕᒐᓂ 2013–ᒥ

ᕿᓚᓗᒐᖅ ᑐᒐᓕᒃ (ᖃᐅᔨᓴᖅᑎᖕᒋᓐᓄᑦ ᑕᐃᔭᐅᔪᖅ ᐃᒫᒃ (Monodon monoceros) *R. Philips ᓇ. ᐱᓕᑉ*



ᐊᕕᒃᑐᖅᓯᒪᔪᓂᒃ ᑕᑯᑎᕐᑎᔾᔪᑦ 1. ᓄᓇᖑᐊᑦ ᐱᖓᓱᔪᖅᑐᓂᒃ 6–ᓂᒃ ᑲᓇᑕᒥᐅᑕᓂᒃ ᑐᒐᓖᑦ ᐊᐅᔭᒃᑯᑦ ᐃᒪᕐᒦᕕᒋᕙᒃᑕᖕᒋᑦ ᐊᒻᒪᓗ ᒪᕐᕉᖕᓂᒃ 2 ᐊᑯᑭᑦᑐᕐᒥᐅᓂ ᐃᒪᕐᒦᕕᒋᕙᖕᒥᔭᖕᒋᓂ ᐃᓕᑕᕆᔭᐅᓯᒪᔪᑦ ᐃᓚᒋᔭᐅᖃᑕᐅᓂᖅ ᓴᓐᓂᕈᑎᐅᑉ ᐃᒪᖓᓂ ᐱᑕᖃᕐᓂᖕᒋᓐᓂᒃ ᑲᓇᑕᒥᐅᓂ–ᐊᑯᑭᑦᑐᕐᒥᐅᓂᓗ ᑕᒪᐃᓐᓂᒃ ᑲᒥᓯᓇᖕᒋᓐᓂᒃ ᓴᐳᓐᓂᐊᖅᑕᐅᓂᖕᒋᓐᓄᑦ ᐊᒻᒪᓗ ᐊᐅᓚᑕᐅᓂᖕᒋᓐᓂᒃ ᑐᒐᓖᑦ ᕿᓇᓗᒐᐃᓪᓗ (ᓇᑭᖓᕐᓂᖕᒋᑦ: NAMMCO/SC/21-JCNB/SWG/14-05).

ᑐᑭᓯᑎᕐᑎᒋᐊᒃᑲᓐᓂᕈᑏᑦ:

ᐋᒫᓯ 2013–ᖑᑎᓗᒍ, ᐊᒥᓱᒐᓴᖕᓂᒃ ᖃᖓᑕᓲᒃᑯᑦ ᓈᓴᖅᑕᐅᓚᐅᕐᒪᑕ ᓯᑕᒪᓂᒃ ᐃᓕᑕᕆᔭᐅᓯᒪᓂᖕᒋᓐᓂᒃ ᑲᓇᑕᒥᐅᓂᒃ ᑐᒐᓕᒃᑕᖃᕐᓂᖕᒋᓐᓂᒃ ᓴᓐᓂᕈᑎᐅᑉ ᐃᒪᐅᓂᖕᒐᓂ ᐊᒻᒪᓗ ᑕᐅᕙᓂ ᐊᐅᓯᐃᕐᑑᑉ ᕿᑭᖅᑕᖕᒐᑕ ᓂᒋᐊᓂ ᐃᒪᖕᓂ ᐊᒻᒪᓗ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖕᒐᓂ ᑕᓯᐅᔭᕐᔪᐊᕐᒥ ᐱᑕᖃᕐᓂᖕᒋᓐᓂ. ᓯᕗᓪᓕᖅᐹᓇᔭᐅᔪᒥᒃ, ᐊᒥᓱᑎᒋᓂᖕᒋᓐᓂᒃ ᓇᓚᐅᑦᑖᕈᑏᑦ ᑕᒪᐃᓐᓂᒃ ᐱᑕᖃᕐᓂᖕᒋᓐᓂᒃ ᓈᓴᖅᑕᐅᓚᐅᖅᑐᑦ ᐊᔾᔨᐃᓐᓇᖕᒐᓂᒃ ᐊᕐᕋᒍᒥ.

ᓄᓇᕗᒻᒥ ᐆᒪᔪᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑲᑎᒪᔨᖕᒋᑦ ᐋᕿᕙᖅᐳᑦ ᑕᒪᐃᓐᓂᒃ ᑲᑎᓪᓗᒋ1ᑦ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖕᒋᓐᓂᒃ ᑐᒐᓖᑦ ᓄᓇᕗᒻᒥ ᓄᓇᑖᕐᕕᐅᓯᒪᓂᕐᒥ. ᐃᖃᓗᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑕᕆᐅᕐᒥᐅᑕᓕᕆᔨᓗ (ᐃᖃᓗᓕᕆᔨᕐᔪᐊᒃᑯᑦ), ᐱᓕᕆᖃᑎᖃᐃᓐᓇᖅᓯᒋᑎᒃ ᐊᐅᓚᑦᑎᔨᐅᖃᑕᐅᔪᓂᒃ, ᐊᑐᖅᑎᑦᑎᓯᒪᓕᖅᑐᑦ ᑲᑎᖓᔪᓂᒃ ᐃᖃᓗᓕᕆᔨᕐᑐᒧᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᓂᒃ ᕿᓇᓗᒐᖅᓂᒃ ᑐᒐᓕᖅᓂᒃ. ᐃᖃᓗᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑕᕆᐅᕐᒥᐅᑕᓕᕆᔨᓪᓗ ᑲᓇᑕᒥ (ᐃᖃᓗᓕᕆᔨᕐᔪᐊᒃᑯᑦ) ᐆᒪᔪᖃᕐᓂᖕᒋᓐᓂᒃ ᐃᓅᖕᓄᑦ ᐃᓅᔾᔪᑎᒃᓴᐅᕙᖕᓂᖕᒋᓐᓂᒃ ᐊᒻᒪᓗ ᐃᖃᓗᓕᕆᔨᕐᒥᒃ ᐊᐅᓚᑦᑎᓂᕐᒥᒃ ᐱᓕᕆᔨᐅᓂᖕᒋᑦ ᑐᒃᓯᕋᓚᐅᕐᒪᑕ ᐅᖃᐅᔾᔭᐅᒋᐊᕈᒪᓂᖅ ᐊᒥᐊᒃᑯᖃᐃᓐᓇᕈᓐᓇᕐᓂᐊᖅᑐᓂᒃ ᐊᖑᓇᓱᒃᑕᐅᔪᓐᓇᕐᓂᖕᒋᓐᓂᒃ ᑐᖓᕕᖃᖅᑐᓂᒃ 2013-ᒥ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᓂᒃ ᓄᓇᕗᒻᒥ ᕿᓇᓗᒐᐃᑦ ᑐᒐᓖᑦ ᐊᐅᔭᒃᑯᑦ ᓇᓃᖃᑦᑕᓂᖕᒋᓐᓂᒃ. ᑖᒃᑯᐊ ᖃᐅᔨᓴᖅᑎᓂᒃ ᐅᖃᐅᔾᔨᒋᐊᖅᑎᓄᑦ ᐅᓂᒃᑳᓕᐊᑦ ᐅᓂᒃᑳᖅᐳᑦ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᓂᒃ ᓄᑖᕈᓇᐊᖅᑕᐅᓯᒪᓕᖅᑐᓂᒃ ᐊᒥᓲᑎᒋᓂᖕᒋᓐᓂᒃ ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᓂᒃ ᐊᒻᒪᓗ ᐅᖃᐅᔾᔨᒋᐊᕈᑎᒃᓴᓂᒃ ᐊᒥᐊᒃᑯᖃᐃᓐᓇᕐᓂᐊᖅᑐᓂᒃ ᕿᓚᓗᒐᖅᓂᒃ ᑐᒐᓕᖅᓂᒃ ᐱᑕᖅᑕᐅᔪᓐᓇᖃᑦᑕᓂᐊᖅᑐᓂᒃ, ᑐᖓᕕᖃᖅᑐᓂᒃ ᐱᕕᐅᖃᑦᑕᕈᓐᓇᕐᓂᖕᒋᓐᓂᒃ ᐃᓚᖃᖅᑐᓂᒃ ᐃᓚᖓᖅᑎᑕᐅᖃᑦᑕᕐᒥᔪᓂᒃ ᐊᑐᖅᓱᑎᒃ.

*ᑖᒃᑯᐊ ᖃᐅᔨᓴᖅᑎᓂᒃ ᐅᖃᐅᔾᔨᒋᐊᕈᑏᑦ ᐅᓂᒃᑳᓕᐊᖕᒋᑦ ᐱᔭᐅᓯᒪᔪᑦ ᑕᐃᒃᑯᓇᖓᑦ ᐊᒃᑑᐱᓇ 20-24, 2014-ᒥ ᐊᕐᕋᒍᑕᒫᖅ ᑲᑎᒪᓚᐅᕐᓂᖕᒋᓐᓂᒃ ᑲᓇᑕᓕᒫᒥ ᑕᓇᐅᕐᒥᐅᑕᓂᒃ ᐆᒪᔪᓕᕆᔨᓂᕐᒧᑦ ᐱᓕᕆᔨᑦ ᕿᒥᕐᕈᐊᕐᓂᖕᒋᓐᓂᒃ ᑲᑎᒪᔨᕐᓱᓂᒃ(NMMPRC–ᑯᕐ). ᐊᓯᑕᖃᕐᒥᔪᖅ ᐅᖃᓕᒫᒐᓕᐊᓇᔭᐅᓯᒪᔪᒥᒃ ᑕᐃᒃᑯᓄᖓ ᑲᑎᒪᓂᓇᔭᐅᓚᐅᖅᑐᓂᒃ ᐱᔭᔪᑎᖃᖅᑐᓂᒃ [ᐃᖃᓗᓕᕆᔨᕐᔪᐊᒃᑯᑦ ᑕᕆᐅᕐᒥᐅᑕᓕᕆᔨᓗ ᖃᐅᔨᓴᖅᑎᓄᑦ ᐅᖃᐅᔾᔨᒋᐊᖅᑎᑦ ᖃᓄᐃᓕᐅᕐᕕᒃᓴᓇᔭᖕᒋᓐᓂᒃ ᐅᓂᒃᑳᕈᑎᑦ DFO Science Advisory Schedule](#) ᐊᑐᐃᓐᓇᐅᓕᕐᖓᒥᒃ.

ᓇᐃᓈᖅᑕᐅᓯᒪᔪᑦ ᐅᓂᒃᑳᓕᐊᑦ

- ᖃᖓᑕᓲᒃᑯᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᕐᒪᑕ ᐱᖓᓱᔪᖅᑐᑦ 6–ᖑᔪᑦ ᕿᓚᓗᒐᕐᓄᑦ ᑐᒐᓕᖕᓄᑦ ᓇᔪᖅᑕᐅᕙᖕᓂᖏᑦ ᐊᐅᔭᒃᑯᑦ ᐃᒪᐃᑦ (ᑕᒡᕙᓂ ᑕᐃᔭᐅᓂᐊᖅᑐᑦ ᑐᒐᓖᑦ ᓇᔪᖅᐸᒃᑕᖏᓐᓂᒃ) ᑲᓇᑕᒥᐅᑦ ᖁᑦᑎᒃᑐᒥ ᐅᑭᐅᖅᑕᖅᑑᓂᖓᓂ ᐋᒐᓯ 2013–ᒥ. ᑕᒪᓐᓇ ᓯᕗᑦᓕᖅᐹᓇᔭᐅᔪᖅ ᓈᓴᖅᑕᐅᓯᒪᓂᖏᓐᓂ ᖁᑦᑎᒃᑐᕐᒥᐅᑕᓂ ᐱᑕᖃᕐᓂᖏᑦ ᕿᓚᓗᒐᐃᑦ ᑐᒐᓕᑦ ᐊᑕᐅᓯᕐᒥᒃ ᐊᐅᔭᐅᓂᕐᒥ, ᐊᒻᒪᓗ ᓯᕗᑦᓕᓇᔭᐅᓪᓗᑎᒃ ᑐᒐᓕᒃᑕᖃᕐᓂᖏᑦ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖓ ᐊᒻᒪᓗ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖑᓂᖓᓂ. ᑕᒪᕐᒥᒃ ᑲᑎᓪᓗᒋᑦ2 ᑲᓇᑕᒥᐅᑕᐃᑦ ᖁᑦᑎᒃᑐᕐᒥ ᐅᑭᐅᖅᑕᖅᑐᒥ ᑐᒐᓖᑦ ᐊᒥᓲᓂᖃᖅᐳᑦ 141,909 (ᐊᔾᔨᒌᖏᓂᖃᕈᓐᓇᖅᑐᑦ ᑐᒐᓖᑦ ᓇᔪᖅᐸᒃᑕᖏᑦ ᐃᒪᓐᓇᑎᒋᐅᔪᓐᓇᖅᑐᓂᒃ 20–ᓂᒃ 65% ᐳᓴᓐᑎᓄᑦ) ᕿᓚᓗᒐᐃᑦ ᑐᒐᓖᑦ.

- ᑖᒃᑯᐊ ᓈᓴᖅᑕᐅᓚᐅᕐᓂᖏᑦ ᑲᑎᑎᑦᑎᓯᒪᓚᐅᖅᑐᑦ ᒪᕐᕈᖕᓂᒃ ᐊᒥᓲᓂᓇᔭᖏᓐᓂᒃ ᓇᓚᐅᑦᑖᕈᑎᓂᒃ ᖃᐅᔨᒪᔾᔪᑕᐅᕙᒃᑐᓂᒃ ᐱᐅᓯᓇᖅᑲᓚᐅᖅᑑᖕᓂᒃ, ᑲᑎᑕᐅᓪᓗᑎᒃ ᓇᓚᐅᑦᑖᕈᑕᐅᓂᖏᓐᓄᑦ ᑕᒪᐃᓐᓂᒃ ᐱᑕᖃᕐᓂᖏᓐᓂᒃ/ᐊᒥᓲᓂᖏᓐᓂᒃ:

  1) ᓇᓃᓐᓂᖏᓐᓂᒃ ᐅᖓᓯᒌᖕᓂᖏᓐᓂᒃ ᐃᔾᔪᐊᖅᓯᓯᒪᓗᑎᒃ ᐊᑐᖅᑕᐅᓚᐅᖅᑐᑦ ᓇᓚᐅᑦᑕᕈᑕᐅᓂᖏᓐᓄᑦ ᖃᓄᖅ ᓂᕈᑭᑎᒋᕙᒪᖓᑕ ᖃᐅᔨᓴᕈᑎᓕᖕᓂᒃ ᑲᖏᖅᓯᖏᓐᓂᒃ; ᐊᒻᒪᓗ

  2) ᓇᓗᓇᐃᒃᑯᑦᑎᖅᑕᐅᓯᒪᔪᑦ ᐱᔭᐅᒃᑲᓐᓂᖃᑦᑕᕐᓂᖏᓐᓂᒃ ᐅᖓᓯᖕᓂᓕᖕᓂᒃ ᐆᒃᑐᕋᖅᑕᐅᖃᑦᑕᖅᓱᑎᒃ ᓇᓚᐅᑖᕈᑕᐅᓚᐅᖅᑐᑦ ᐱᑕᖃᖅᑎᓂᖏᓐᓂᒃ ᑐᒐᓖᑦ ᐊᓯᐊᓃᖕᒐᖅᓯᒪᓕᖅᓱᑎᒃ ᓇᓗᓇᐃᒃᑯᑦᑎᖅᑕᐅ2ᕝᕕᐅᓚᐅᖅᑕᖏᓐᓂᒃ.

- ᑕᒪᕐᒥᒃ ᑲᑎᓪᓗᒋᑦ ᐱᑕᖃᕐᓂᖏᑦ ᓇᓚᐅᑦᑕᕈᑏᑦ ᐃᓚᖃᓚᐅᕐᒥᔪᑦ ᑕᑯᔭᐅᖃᑦᑕᓚᐅᕐᓂᖏᓐᓂᒃ ᖃᓄᐃᓕᖓᓇᓱᒋᔭᐅᓚᐅᖅᑐᓂᒃ (ᑕᑯᔭᐅᖃᑦᑕᐅᓚᐅᖅᑐᓂᒃ ᑐᖓᐅᑦᑎᖃᑕᓚᐅᕐᓂᖏᓐᓂᒃ ᐱᑕᖃᖃᑦᑕᓚᐅᕐᒥᔪᒥᒃ ᑕᑯᒃᓴᐅᔪᓂ) ᓇᓚᐅᑦᑖᖅᑕᐅᓪᓗᑎᒃ ᐊᒥᓱᓄᑦ ᐊᓯᖏᓐᓄᑦ ᑕᑯᔭᐅᖃᑦᑕᕐᓂᖏᓐᓂᒃ ᓯᕗᐊᒍᑦ, ᐊᒻᒪᓗ ᑐᒡᓕᕐᒥᒃ ᑐᓄᐊᒍᑦ ᑕᑯᔭᐅᖃᓐᓂᖃᑦᑕᓚᐅᕐᓂᖏᓐᓂᒃ.

- ᐱᑕᖃᕐᓂᖏᑦᑕᐅᖅ ᐋᕿᒋᐊᖅᑕᐅᖃᑦᑕᓚᐅᕐᒥᔪᑦ ᑕᒻᒪᖅᓯᒪᔪᔫᕐᓂᖏᑦ ᐊᑐᐃᓐᓇᐅᔪᓐᓇᕐᓂᖏᓐᓂᒃ ᖃᓄᐃᓕᖓᓇᓱᒋᔭᐅᔪᓂᒃ (ᐱᖃᓯᐅᔭᔭᐅᓯᒪᔭᕆᐊᖃᕐᓂᖏᓐᓄᑦ ᐃᓚᖏᑦ ᐊᑯᓂᐅᓂᖃᖅᐸᖕᓂᖏᑦ ᐊᖅᑲᓲᖑᓂᖏᓐᓄᑦ ᑐᒐᓕᑦ ᑕᑯᒃᓴᐅᓕᕐᒥᑎᑦᓗᒋᑦ ᐃᒪᕐᒥᒃ ᐳᐃᔭᕋᖓᒥᒃ) ᓈᓴᖅᑕᐅᑦᓗᑎᒃ ᐳᓴᓐᑎᑎᒍᑦ ᐊᑯᓂᐅᓂᖃᖅᑎᒋᕙᓚᐅᕐᓂᖏᓐᓂᒃ ᒪᓕᒃᓱᑎᒃ ᖁᒻᒧᐊᒃᑎᑕᐅᓯᒪᔪᒍᑦ–ᒪᓕᒃᑕᐅᔪᓂᒃ ᕿᓚᓗᒐᐃᑦ ᑐᒐᓖᑦ, ᑕᒫᓂ ᐅᖓᓯᖕᓂᓕᖕᒥᒃ ᒪᕐᕉᖕᓂᒃ 2 ᒥᑖᖕᓂᒃ ᐳᐃᓯᒪᕝᕕᐅᕙᖕᓂᖏᓐᓂᒃ (ᐅᕝᕙᓗᓐᓃᑦ ᐊᑕᐅᓯᕐᒥᒃ 1 ᒥᑕᓂᒃ ᑲᖏᖅᓱᓂᒃ ᑕᑯᒃᓴᐅᓇᑦᑎᐊᖏᑦᑐᓂᒃ ᐃᒪᕐᒦᑦᑐᓂᒃ). ᐋᕿᒋᐊᕈᑎᖃᖅᑎᑕᐅᓚᐅᖅᑐᑦ ᖃᓄᐃᓕᖓᓇᓱᒋᔭᐅᕙᓚᐅᕐᓂᖏᑦ ᓈᓴᐅᑎᓂᒃ ᐊᑐᖅᓱᑎᒃ 2.94–ᓂᒃ ᐆᒃᑐᕋᐅᑎᖃᖅᑐᓂᒃ (ᐊᒻᒪᓗ 4.53–ᓂᒃ ᐆᒃᑐᕋᐅᑎᖃᖅᑐᓂᒃ ᑲᖏᖅᓱᓂᒃ ᑲᓇᖕᓇᖅᐸᓯᐊᓂᒃ ᕿᑭᖅᑖᓗᖕᒥ).

- ᐱᑕᖃᕐᓂᖏᑦ ᑐᒐᓖᑦ ᖃᓂᓈᖅᑕᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᓈᓴᐅᑎᓕᖕᒍᑦ 500–ᒥᒃ ᐊᑐᖃᑦᑕᖅᓱᑎᒃ, ᑕᐃᒪ ᑕᐅᕙᓂ ᓈᓴᖅᑕᐅᓚᐅᖅᑐᑦ ᐃᒫᒃ, 12,500–ᓂᒃ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᕐᓂ, 16,000–ᓂᒃ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖓᓂ, 50,000–ᓂᒃ ᑰᓇᔫᑉ ᑲᓇᖕᓇᖓᓂ, 35,000–ᓂᒃ ᓴᓐᓂᕈᑎᐅᑉ ᑐᓄᓂᕈᓯᐅᓪᓗ ᐃᒪᖓᓂ, 10,500–ᓂᒃ ᑕᓯᐅᔭᐅᓂᖓᓂ ᐃᓐᓈᓗᒃ ᑲᖏᖅᓱᐊᕐᔪᖓᓂ ᐊᒻᒪᓗ 17,500–ᓂᒃ ᑲᓇᖕᓇᖅᐸᓯᐊᓂ ᕿᑭᖅᑖᓗᑉ ᐃᒪᖏᓐᓂ, ᑲᑎᓪᓗᒋᑦ ᑕᒪᕐᒥᒃ ᐊᒥᓲᓂᖃᖅᑎᒋᓪᓗᑎᒃ 142,000–ᓂᒃ ᕿᓚᓗᒐᕐᓂᒃ ᑐᒐᓕᖕᓂᒃ ᑲᓇᑕᒥᐅᑦ ᖁᑦᑎᖕᓂᕐᒥᒃ ᐅᑭᐅᖅᑕᖅᑑᓂᖓᓂ.

- ᐃᓱᒪᒋᔭᐅᓪᓗᑎᒃ ᒪᓕᒃᑕᐅᑦᑎᐊᖅᑐᔾᕐᓂᖏᑦ ᑐᒐᓖᑦ ᕿᓚᓗᒐᕐᖃᕐᓂᖏᑦ ᐱᖓᓱᔪᖅᑐᓂᒃ 6–ᓂ ᐊᐅᔭᒃᑯᑦ ᓇᔪᖅᑕᐅᕙᒃᑐᓂ, ᐊᒻᒪᓗ ᒪᓕᒃᒧᑕᐅᓪᓗᑎᒃ ᐊᒥᓱᑎᒋᓚᐅᕐᓂᖏᑦ ᓇᓚᐅᑖᖅᑕᐅᓚᐅᖅᓯᒪᔪᑦ 2013–ᒥ, ᑕᐃᒃᑯᐊ ᑕᒪᕐᒥᒃ ᑲᑎᓪᓗᒋᑦ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖏᓐᓄᑦ ᐅᖃᐅᔨᒋᐊᕈᑕᐅᓕᖅᐳᑦ ᐃᒫᒃ, 76–ᓂᒃ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᕐᒥ, 77–ᓂᒃ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖓᓂ, 658–ᓂᒃ ᑰᓇᔫᑉ ᑲᓇᖕᓇᖓᓂ, 389–ᓂᒃ ᓴᓐᓂᕈᑎᐅᑉ ᑐᓄᓂᕈᓯᐅᓪᓗ ᐃᒪᖓᓂ, 134–ᓂᒃ ᑕᓯᐅᔭᖅ ᐃᓐᓈᓗᒃ ᑲᖏᖅᓱᐊᕐᔪᖕᒥ, ᐊᒻᒪᓗ 206–ᓂᒃ ᑲᓇᖕᓇᖅᐸᓯᐊᓂ ᕿᑭᖅᑖᓗᑉ ᑕᕆᐅᖓᓂ, ᑲᑎᓪᓗᒋᑦ ᑕᒪᕐᒥᒃ 1,540–ᖑᓪᓗᑎᒃ ᑐᒐᓖᑦ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖏᑦ ᐊᕐᕋᒍᑕᒫᖅ. ᑕᐃᒃᑯᐊ ᑐᒐᓖᑦ ᑕᐅᕙᖓᑦ ᑕᓯᐅᔭᖅ ᐃᓐᓈᓗᒃ ᑲᖏᖅᓱᐊᕐᔪᖕᒥ ᐊᒻᒪᓗ ᓴᓐᓂᕈᑎᐅᑉ ᑐᓄᓂᕈᓯᐅᓪᓗ ᐃᒪᖓᓃᑦᑐᑦ ᐊᑕᐅᓯᓐᓇᐅᓇᓱᒋᔭᐅᒍᑎᒃ

ᑕᐃᒃᑯᐊᓴᐃᓐᓇᐅᓗᑎᒃ, ᑕᐃᒃᑯᐊ ᑕᒪᕐᒥᒃ ᐱᑕᖅᑕᐅᔪᓐᓇᖅᑎᒋᓂᖕᒋᓐᓄᑦ ᐊᒥᓲᓂᖕᒋᑦ ᑕᐃᒫᑐᐃᓐᓇᖅ ᓈᓴᖅᑕᐅᓯᒪᔪᓐᓇᔭᖕᒋᒻᒥᔪᑦ. ᑕᒪᕐᒥᒃ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖕᒋᑦ ᑐᒫᓖᑦ ᑲᑎᑦᓗᒋᑦ 542–ᖑᓇᔭᖅᑐᑦ ᑐᒫᓖᑦ.

- ᐱᔭᐅᔪᓐᓇᕐᓂᖕᒋᑦ ᑐᒫᓖᑦ ᓄᓇᓕᖕᓄᑦ ᐱᐅᓯᖃᕆᐊᖃᕐᓂᐊᖅᑐᑦ ᓇᓴᖅᑕᐅᖃᑕᐅᖃᑦᑕᕐᓗᑎᒃ ᐃᓛᓂᒃᑯᑦ ᐊᕐᕋᒍᒥᒃ ᐱᑕᖅᑕᐅᖃᑦᑕᕐᓂᖕᒋᑦᑕᐅᖅ ᐊᓯᖕᒋᓂᖕᒐᖅᓯᒪᕙᖕᒥᔪᑦ.

ᓯᕗᓪᓕᖅᐹᒥ ᐅᖃᐅᓯᒃᓴᐃᑦ

ᑲᓇᑕᒥᓕ, ᓴᓐᓂᕈᑎᐅᑉ ᐃᒪᖕᒐᓂ ᕿᓚᓗᒐᐃᑦ ᑐᖕᒐᓖᑦ ᒫᓐᓇᐅᓕᖅᑐᖅ ᐊᐅᓚᑕᐅᕙᖕᒪᑕ ᓯᑕᒪᐅᓂᕋᖅᑕᓗᑎᒃ ᐊᕕᒃᑐᖅᓯᒪᔪᑦ ᑲᑎᖕᒐᕙᖕᓂᖕᒋᑦ, ᐊᑐᓂ ᑭᒡᒐᖅᑐᐃᓪᓗᑎᒃ ᐊᔾᔨᒌᖕᒋᑦᑑᑎᐅᔪᓂᒃ ᓇᔪᖅᑕᐅᕙᒃᑐᓂᒃ, ᓲᕐᓗ ᐆᒃᑑᑎᒋᓗᒍ: ᑰᒐᓇᔫᑉ ᑲᓇᖕᓇᖕᒐᓂ - (SI), ᓴᓐᓂᕈᑎᐅᑉ ᑐᓄᓂᕈᓯᐅᓪᓗ ᐃᒪᖕᒐᓂ (AI), ᑕᓯᐅᔭᖅ ᐃᓐᓈᓗᒃ ᑲᖕᒋᖅᓯᐊᕐᔪᖕᒥ (ES–ᒥ) ᐊᒻᒪᓗ ᑲᓇᖕᓇᖅᐹᓯᐊᓂ ᕿᑭᖅᑖᓗᑉ ᑕᓇᐅᖕᒐᓂ (EB-ᒥ). ᐊᒥᓱᒐᓴᐃᑦ ᑐᒫᓖᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᑦ ᐃᖃᓗᓕᓇᔨᕐᔪᐊᒃᑯᓐᓄᑦ ᑕᐅᕙᓂ ᑲᓇᖕᓇᖅᐹᓯᐊᓂ ᑲᓇᑕᒥᐅᑦ ᐅᑭᐅᖅᑕᖅᑑᓂᖕᒐᓂ 1975–ᒥᓂᒃ 2011–ᒧᑦ ᑎᑭᓪᓗᒍ, ᓇᓚᐅᑦᑖᖅᑕᐅᔪᒪᓪᓗᑎᒃ ᐱᑕᖃᕐᓂᖕᒋᑦ ᐊᔾᔨᒌᖕᒋᑦᑐᑏᑦ ᑖᒃᑯᐊ ᓴᓐᓂᕈᑎᐅᑉ ᐃᒪᖕᒐᓃᖃᑦᑕᖅᑐᓂᒃ (ᐃᖃᓗᓕᓇᔨᕐᔪᐊᑯᑦ DFO 2012, Doniol-Valcroze et al. 2015a). ᑕᒪᕐᒥᒃᓴᐃᑦ ᓯᕗᓂᐊᒍᑦ ᐊᒥᓲᑎᒋᓂᖕᒋᑦ ᐱᑕᖃᖅᑎᒋᓂᖕᒋᑦ ᖃᐅᔨᒪᓚᐅᖅᑐᑦ ᐱᔭᕇᖅᑕᐅᓯᒪᖕᒋᓐᓂᖕᒋᓐᓂᒃ. ᑐᒫᓕᒃᑕᖃᖃᑦᑕᕐᒥᖕᒪᑦ ᐊᓯᖕᒋᓐᓂ ᑲᓇᑕᐅᑉ ᖁᑦᑎᒃᑐᒥ ᐅᑭᐅᖅᑕᖅᑑᓂᖕᒐᓂ ᐊᐅᔭᒃᑯᑦ (ᓲᕐᓗ ᕿᑎᖅᒥᐅᓂ ᐃᑭᕋᓴᐅᑉ ᐃᒪᖕᒐᓂ ᐃᑦᑐᐊᖅᑐᕐᕕᖕᒥ ᐊᒻᒪᓗ ᐃᖃᓗᒃᑑᑦᑎᐊᕐᓂ) ᑭᓯᐊᓂ ᑐᒫᓖᑦ ᐱᑕᖃᕐᒪᖕᒫᑕ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᓯᒪᖕᒋᓚᑦ ᑕᒫᓂ. 2013–ᖑᓕᖅᑎᓪᓗᒍ, ᒪᕐᕉᓂᒃ 2 ᑐᒫᓕᒃᑕᖃᕐᕕᐅᕙᖕᒥᔪᓂᒃ ᓯᕗᓂᐊᒍᑦ ᐃᓕᑕᓇᔭᐅᓯᒪᖃᑦᑕᓚᐅᖅᑐᓂᒃ ᑕᐅᕙᓂ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖕᒐᑕ ᓂᒋᐊᓂ ᐃᒪᖕᒋᓐᓂ ᐊᒻᒪᓗ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖕᒐᓂ ᑕᓯᐅᔭᕐᔪᐊᖕᒐᓂ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑑᒃ. ᓯᕗᓂᐊᒍᑦ ᓈᓴᖅᑕᐅᓯᒪᔪᐃᓐᓇᐅᓯᒪᖕᒋᒻᒪᑕ ᑕᒪᕐᒥᒃ ᖃᐅᔨᒪᔭᐅᓂᖕᒋᑦ ᖁᑦᑎᒃᑐᒥ ᑐᒫᓖᒃᑕᖃᕐᓂᖕᒋᑦ ᐃᒪᐃᑦ, ᐊᑕᐅᓯᕐᒥᒃ ᐊᐅᔭᐅᓂᕐᒥ.

ᑐᒫᓖᑦ ᐊᐅᔭᒃᑯᒃ ᑕᐅᕙᓃᖃᑦᑕᖅᑐᑦ ᑲᓇᖕᓇᖅᐹᓯᐊᓂ ᑲᓇᑕᐅᑉ ᐅᑭᐅᖅᑕᖅᑑᑎᓂᖕᒐ ᑕᐃᔭᐅᓯᒪᖕᒪᑕ ᒪᓕᒐᖅᑎᒍᑦ ᐊᔾᔨᐅᖕᒋᑦᑐᒥᒃ ᐃᓱᒪᓘᑖᐅᓂᖅ ᑕᐃᑯᓄᖕᒐ ᑲᑎᒪᔨᕋᓛᓄᑦ ᖃᓄᐃᓕᖕᒐᓕᕐᓂᖕᒋᓐᓄᑦ ᐊᒥᓲᖕᒋᓗᐊᓕᖅᑐᑦ ᐆᒪᔪᐃᑦ ᑲᓇᑕᒥ (COSEWIC-ᑯᑦ/ᑳᔅᐅᐃᒃᑯᑦ) ᐊᒻᒪᓗ ᓯᕗᓪᓕᐅᑎᑕᐅᓯᒪᓪᓗᑎᒃ ᐃᒪᕐᒥᐅᑕᓕᕆᓂᕐᒧᑦ ᐃᖃᓗᓕᓇᔨᕐᔪᐊᒃᑯᓐᓄᑦ. ᑐᒫᓖᑦ ᕿᓚᓗᒐᐃᑦ ᐃᓕᑕᓇᔭᐅᓯᒪᓕᖅᑐᑦ ᑎᑎᖃᐃᑦ ᐃᓚᒃᑯᖕᒋᓐᓂᖕᒋᓐᓄᑦ ᑐᒡᓕᓇᔭᐅᔪᓄᑦ II–ᓄᑦ ᑲᑎᒻᒪᑕᐅᕐᓯᒪᓂᖕᒋᓐᓄᑦ ᓄᓇᕐᔪᐊᕐᒥᐅᑕᓄᑦ ᓂᐅᕐᕈᑎᒃᓴᖃᖅᐸᖕᓂᖅ ᐊᒥᓲᖕᒋᓗᐊᓕᖅᑐᓂᒃ ᐆᒪᔪᓂᒃ (CITES–ᑯᑦ/ᓴᐃᑏᓴᑯᑦ) ᐊᒻᒪᓗ ᐅᓗᓇᐊᓇᖅᑐᒦᖕᒋᓐᓂᖅᕋᖅᑕᐅᓯᒪᔭᓇᐊᖃᓇᓪᓗᑎᒃ (ᐅᓗᓇᐊᓇᖅᑐᒦᖕᒋᓐᓂᕋᖅᑕᐅᓂᖅ) ᐃᓱᒪᓕᐅᕈᑕᐅᓯᒪᓪᓗᑎᒃ ᐃᖃᓗᓕᓇᔨᕐᔪᐊᒃᑯᑦ ᖃᐅᔨᓴᖅᑏᑦ ᐊᐅᓚᑦᑎᔨᐅᓂᖕᒋᓐᓄᑦ, ᑕᐃᒪᐃᓕᖕᒐᓗᑎᒃ ᑭᓯᐊᓂ ᐱᔪᓐᓇᐅᑕᐅᖃᑦᑕᕐᒪᑕ ᓴᐃᑎᔅᑯᓐᓂᒃ ᑐᔪᐃᔪᓐᓇᕐᓂᕐᒥᒃ/ᑎᑭᓴᐃᔪᓐᓇᕐᓂᕐᒥᓄᓪᓗᓐᓂᑦ ᐱᔪᓐᓇᐅᑎᑖᕈᑕᐅᓯᒪᔪᓐᓇᕐᓂᖅ, ᑲᓇᑕᐅᑉ ᓯᓚᑖᓄᑦ ᑐᔪᐃᔪᖃᖃᑦᑕᕐᓂᐊᕈᓂ ᑐᒫᓕᒥᓂᕐᓂᒃ ᓄᓇᕐᔪᐊᕐᒥ. ᐱᑕᖅᑕᐅᓯᒪᔪᑦ ᑐᒫᓖᑦ ᑲᓇᑕᒥ ᐊᐅᓚᑦᑎᕕᐅᔪᓂ ᐃᓚᒋᔭᐅᓲᖑᖕᒋᓚᑦ ᓄᓇᕐᔪᐊᕐᒥ ᓂᐅᕐᕈᑎᒃᓴᐅᔪᓐᓇᖅᑐᓂᒃ ᑕᐃᒃᑯᐊ ᐱᑕᖅᑕᐅᓯᒪᓂᖕᒋᑦ ᐅᖓᑕᐅᔾᔨᓯᒪᒍᑎᒃ ᑕᒪᐃᓐᓂᒃ ᑲᑎᑕᐅᓯᒪᓪᓗᑎᒃ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖕᒋᓐᓂᒃ ᐊᑐᓕᕐᑯᔭᓕᐊᓂᖑᓯᒪᔪᓂᒃ ᐱᑕᖃᕐᓂᖕᒋᑦ ᑐᒫᓖᑦ ᐊᑐᓂ. ᐊᑖᒍᑦ ᓯᐃᑏᓴᑯᑦ ᒪᓕᒐᖓᒍᑦ, ᓄᑖᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᓂᒃ ᑐᓴᒐᒃᓴᐃᑦ ᐊᒻᒪᓗ ᑎᑎᕋᖅᑕᐅᓯᒪᓕᖅᑐᑦ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕈᑎᒃᓴᐃᑦ ᐱᑕᖃᓇᐊᖃᓲᖑᒋᕗᑦ ᖃᐅᔨᒪᔾᔪᑕᐅᑦᑎᐊᕐᓂᐊᕐᒪᑕ ᐊᒥᐊᒃᑯᖃᐃᓐᓇᕈᓐᓇᕐᓂᐊᖅᑐᓂᒃ ᑐᒫᓕᖕᓂᒃ ᐊᐅᓚᑦᑎᔪᓐᓇᕐᓂᖅ ᐱᔪᓐᓇᐅᑕᐅᓇᔭᖅᑐᓂᒃ ᓄᓇᕐᔪᐊᕐᒥᐅᑕᓄᑦ ᓂᐅᕐᕈᑎᒃᓴᐅᓕᕈᓐᓇᕐᓂᖅ.

ᑖᒃᑯᐊ ᑲᓇᑕᒥᐅᑕᓄᑦ ᖃᐅᔨᓴᖅᑎᓄᒃ ᐅᖃᐅᔾᔨᒋᐊᖅᑎᐅᕙᖅᑐᑦ ᐱᓕᕆᕕᖓᑦ (CSAS–ᑯᑦ) ᖃᐅᔨᓴᖅᑎᓄᒃ ᐅᖃᐅᔾᔨᒋᐊᖅᑎᓂᒃ ᐅᓂᒃᑳᓕᐊᑦ ᐱᑕᖃᖅᐳᑦ ᓄᑖᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓕᖅᑐᓂᒃ ᐅᖃᐅᔾᔨᒋᐊᕈᑎᒃᓴᓂᒃ ᐱᔾᔪᑎᖃᖅᑐᓂᒃ ᑕᒪᐃᓐᓂᒃ ᑲᑎᓪᓗᒋᑦ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖕᒋᓐᓂᒃ ᐊᑐᓂ ᓴᓐᓂᕈᑎᐅᑉ ᐃᒪᖕᒐᓂ ᑐᒫᓕᒃᑕᖃᕐᕕᐅᓂᖕᒋᓐᓂ, ᐊᒻᒪᓗ ᑐᒫᓕᒃᑕᖃᕐᕕᐅᓂᖕᒋᓐᓂ ᑕᐅᕙᓂ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖕᒐᓂ ᑕᓯᐅᔭᕐᔪᐊᖅ ᐊᒻᒪᓗ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖕᒐᑕ ᓂᒋᐊᓂ ᐃᒪᖕᒋᓐᓂ.

ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᑦ ᑐᑭᓯᓂᐊᕈᑕᐅᓂᕐᒧᑦ

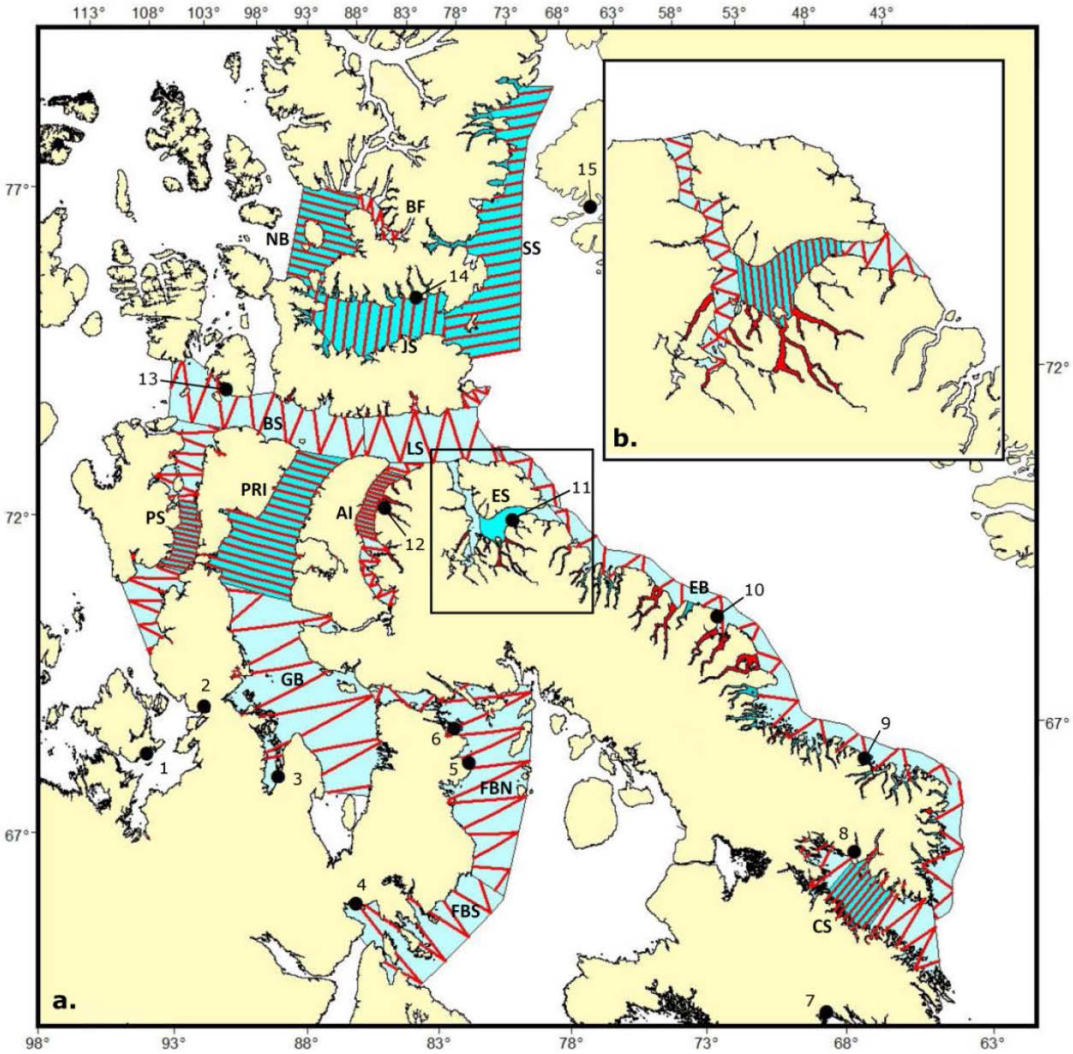
ᐊᑐᖅᑕᐅᓚᐅᖅᑐᑦ ᖃᐅᔨᓴᕈᓯᑦ

ᓈᓴᖅᑕᐅᓂᖕᒋᑦ ᐋᕿᐅᒪᓚᐅᖅᑐᑦ ᑕᒪᒃᑭᖅᑕᐅᔪᒪᓪᓗᑎᒃ ᐊᐅᔭᒃᑯᑦ ᓇᔪᖅᑕᐅᕙᖕᓂᖕᒋᑦ ᐃᒪᐃᑦ ᑐᒫᓕᖕᓄᑦ ᕿᓚᓗᒐᕐᓄᑦ ᑲᓇᑕᒥᐅᑦ ᖁᑦᑎᒃᑐᒥᒃ ᐅᑭᐅᖅᑕᖅᑐᒥ (ᐊᕕᒃᑐᖅᓯᒪᔪᓂᒃ ᑕᑯᑎᑦᑎᔾᔪᑦ 1), ᐊᑕᐅᑎᒃᑯᑦ (Doniol-Valcroze et al. 2015b). ᑐᒫᓕᑦ ᐃᓱᒪᒋᔭᐅᓯᒪᖕᒪᑕ ᐅᐸᒃᓯᒪᓚᐅᖅᑕᒥᓄᑦ ᐅᑎᖃᑦᑕᐃᓐᓇᓲᖑᓂᖅ ᐊᐅᔭᒃᑯᑦ. ᑭᓯᐊᓂᓕᑕᐅᖅ, ᒫᓐᓇᓴᖅ ᐃᓱᒪᓇᖅᓯᓕᓚᐅᕐᒥᔪᖅ ᐃᓛᓂᒃᑯᑦ ᐊᒥᓲᖕᒋᑦᑑᒐᓗᐊᓂᒃ ᓂᑭᑖᖃᑕᕐᒥᔪᑦ ᓇᓃᕝᕕᒋᓂᐊᓕᕐᒥᒪᔭᒥᓂᒃ (Dietz et al. 2001, Heide-Jørgensen et al. 2002, Watt et al. 2012). ᑕᐃᒪᓐᓇᐃᓂᖓᓄᑦ, ᓇᔪᒐᓇᔭᐅᕙᒃᑐᑦ ᑕᒪᕐᒥᒃ ᓈᓴᖅᑕᐅᔭᖅᑐᕐᕕᐅᓚᐅᖅᑐᑦ ᐱᖓᓱᔪᖅᑐᑦ 6–ᖑᔪᑦ ᐊᑕᐅᓯᕐᒥᒃ ᑕᕐᑭᐅᓚᐅᖅᑐᒥ, ᐊᑐᖅᓱᑎᒃ ᐱᖓᓱᓂᒃ 3 ᖃᖓᑕᓲᕐᓂᒃ ᒪᕐᕈᐃᖅᑕᖅᑕᐅᓗᑎᒃ ᓈᓴᖅᑕᐅᕐᑯᓇᒋᑦ. ᓯᕗᓪᓕᐅᑎᑕᐅᓚᐅᖅᑐᑦ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖓ, ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᕐᒥ, ᐊᒻᒪᓗ ᑰᒐᓇᔫᑉ ᑲᓇᖕᓇᖓᓂ ᐃᒪᖕᒋᑦ ᐱᔾᔪᑕᐅᓗᑎᒃ ᓯᕗᓂᐊᒍᑦ ᖃᐅᔨᓴᕐᕕᐅᓯᒪᖕᒋᒪᑕ ᓈᓴᐃᕝᕕᐅᓯᒪᒐᑎᒃ, ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖓ, ᐊᒻᒪᓗ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᕐᒥ ᐋᒐᓱᐅᓕᖅᑎᓪᓗᒍ ᐊᒻᒪᓗ ᑰᒐᓇᔫᑉ ᑲᓇᖕᓇᖓᓂ ᐃᒪᕐᒥ ᐊᒥᓲᓂᕋᖅᑕᐅᓯᒪᓂᖕᒋᑦ 17–ᓂᒃ ᐊᕐᕋᒍᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᕈᓐᓃᕐᒪᑕ.

ᐊᑐᓂ ᑕᐃᒃᑯᐊ ᐱᑕᖃᓲᑦ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᓕᐊᖑᓂᖕᒋᓐᓂ ᐊᕕᒃᑐᖅᑕᐅᓯᒪᖃᑕᓚᐅᖅᑐᑦ (ᐊᕕᒃᑐᖅᓯᒪᔪᓂᒃ 2.), ᑐᖓᕕᖃᖅᓱᑎᒃ ᓇᐅᒃᑯᑦ ᑭᒡᓕᖃᕐᓂᖕᒋᓐᓂᒃ ᐊᒻᒪᓗ ᐱᑕᖃᖅᑎᒋᓂᐊᖅᑐᔫᕐᓂᖕᒋᓐᓂᒃ ᑐᒫᓛᑦ ᕿᓚᓗᒐᐃᑦ ᒪᓕᒃᑕᐅᓪᓗᑎᒃ ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑖᓂᒃᓯᒪᔪᑦ. ᑕᐃᒃᑯᐊ ᖃᐅᔨᒪᔾᔪᑎᒃᓴᐃᑦ ᐱᑕᖃᖕᒋᑳᖕᒐᒥᒃ, ᐃᓄᐃᑦ ᖃᐅᔨᒪᔭᑐᖃᖕᒋᑦ ᐊᒻᒪᓗ/ᐅᕝᕙᓗᓐᓃᑦ ᑕᑯᖃᑦᑕᖅᓯᒪᔭᖕᒋᓐᓂᒃ ᖃᖓᑕᓲᒃᑯᑦ ᖁᓚᐅᑕᐅᖃᑦᑕᓚᐅᖅᑐᓂᒃ 2012-ᒥ ᐊᑐᖅᑕᐅᓚᐅᖅᑐᑦ ᑐᑭᓕᐅᕈᑕᐅᓂᕐᒧᑦ ᖃᓄᖅ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓂᐊᕐᒪᖔᑖ. ᖃᐅᔨᓴᕐᕕᒃᓴᐃᑦ ᐅᖓᓱᖕᓂᖃᖅᑎᑕᐅᕙᓚᐅᖅᑐᑦ ᓇᓕᒧᒋᐊᖅᑐᓂᒃ ᐅᖓᓱᖕᓂᓕᖕᓂᒃ, ᐊᒻᒪᓗ ᐅᖓᓱᓛᖑᓂᖕᒐᓂᒃ ᓂᕈᑐᓛᖑᓂᖕᒐᒍᑦ ᓴᓂᖓᔪᓕᐅᕐᕕᐅᓯᒪᓪᓗᑎᒃ ᑲᑎᖓᕕᖃᖅᑑᖕᓂᒃ ᐊᕙᓗᐊᒍᑦ (ᐊᕕᒃᑐᖅᓯᒪᔪᓂᒃ 2.). ᓴᓂᓕᓈᒃᑐᒐᓴᖕᓂᒃ ᑐᑭᒧᐊᒃᑐᓂᒃ ᓴᓂᒧᓪᓗᓐᓃᑦ ᐊᕕᒃᑐᐃᓯᒪᓚᐅᕐᒥᔪᑦ ᐊᒻᒪᓗ ᐅᑕᖅᑕᕋᖅᓯᒪᓪᓗᑎᒃ ᑐᑭᒧᑦ, ᓴᓂᒧᑦ, ᑐᑭᒧᓪᓗ ᑕᐃᒫᒃ ᑲᔪᓯᓯᒪᔪᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓂᖕᒋᓐᓂᒃᓄᑦ ᒥᑭᔪᑎᐅᓂᖅᓴᐃᑦ ᐊᒥᓱᓂᒃ ᑐᒐᓕᒃᑕᖃᕐᓂᖕᒋᓐᓂᒃ (ᓴᓂᓕᓈᒃᑐᓂ ᑐᑭᒧᐊᒃᑐᓂᒃ) ᐊᒻᒪᓗ ᐊᖕᒋᔫᑎᓂᒃ ᐃᒪᐅᓂᖕᒋᓐᓂᒃ ᐊᒥᓲᓂᐊᕋᓱᒋᔭᐅᖕᒋᑦᑐᓂ ᑐᑭᒧᐊᒃᑐᓂᒃ ᓴᓂᒧᐊᒃᑐᓂᒡᓗ ᐅᑎᖅᑕᖅᓱᑎᒃ. ᑖᒃᑯᐊ ᐱᓇᓱᐊᖅᑕᐅᓚᐅᖅᑐᑦ ᓈᓴᐃᕝᕕᐅᕋᓂᒐᓗᐊᕐᓂᖅ ᐊᑐᓂ ᐊᑕᐅᓯᕐᒥᒃ ᒪᕐᕈᖕᓂᒡᓗᓐᓃᑦ 1-2-ᓂᒃ ᐅᓪᓗᖕᓂᒃ.

ᑐᒫᓛᑦ ᑲᖕᒋᖅᓱᓃᒐᔪᖕᒪᑕ ᐃᑎᔫᑎᓂ ᑐᕙᐃᖓᓕᖅᑎᓪᓗᒍ ᐊᐅᔭᒃᑯᑦ (Dietz et al. 2001). ᐱᔾᔪᑕᐅᓪᓗᑎᒃ ᑲᖕᒋᖅᓱᐃᑦ ᑕᑭᔪᓲᖑᓂᖕᒋᑦ ᓂᕈᑐᒐᑎᒃ, ᖃᓄᑐᐃᓐᓇᖅ ᐋᕿᐅᒪᔪᓐᓇᖅᓱᑎᒃ ᐊᒻᒪᓗ ᓴᓂᕋᖅᑲᕈᓐᓇᖅᓱᑎᒃ ᐳᖅᑐᔪᐊᓗᖕᓂᒃ, ᖃᐅᔨᓴᖅᑕᐅᔪᓐᓇᖃᑦᑕᖕᒋᒻᒪᑕ ᐊᑐᕐᓗᑎᒃ ᑐᑭᒧᐊᑐᐃᓐᓇᖅᑐᑦ ᐊᕕᒃᑐᐃᓯᒪᔾᔪᑏᑦ, ᑕᐃᒪᐃᓂᖕᒋᓐᓄᑦᓗ ᐅᖓᓱᖕᓂᖃᖅᑐᓂᒃ ᓇᓚᐅᑦᑖᕈᑎᓂᒃ ᐊᑐᖅᑕᐅᕙᒃᑑᒐᓗᐊᑦ ᐊᑐᖅᑕᐅᔪᓐᓇᖃᑦᑕᖕᒋᓚᑦ ᑕᐃᒪᐃᓕᖓᔪᓂ. ᑕᐃᒪᐃᓐᓂᖓᓄᑦ, ᐊᕕᒃᑐᖅᑕᐅᓯᒪᔪᓂᒃ ᖃᐅᔨᓴᕈᑎᒃᓴᓂᒃ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᓂᒃ ᐋᕿᐅᒪᑎᑦᑎᓕᓚᐅᖅᑐᑦ ᑲᖕᒋᖅᓱᓂ ᖃᐅᒪᔾᔪᑕᐅᑎᐊᕐᓂᐊᖅᑐᓂᒃ (Doniol-Valcroze et al. 2015a) ᐊᑐᓂ ᑲᖕᒋᖅᓱᐃᑦ ᐱᒻᒪᕆᐅᔪᓂᒃ ᐆᒃᑐᕋᕐᕕᑦᑎᐊᕙᐅᓗᑎᒃ ᐊᒻᒪᓗ ᐱᑕᖃᖅᑎᒋᓂᖕᒋᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᓐᓇᖅᓱᑎᒃ ᐊᑐᓂ ᑕᐃᒃᑯᓇᓂ ᐃᖕᒥᒍᖓᑎᑕᐅᓪᓗᑎᒃ.

ᖃᐅᔨᓴᖅᑕᐅᔾᔪᑎᒃᓴᖕᒋᑦ ᓴᓇᔭᐅᓯᒪᓚᐅᖅᑐᑦ ᒪᕐᕈᐃᓕᖃᖓᔪᑎᑐᑦ ᖃᐅᔨᓴᕈᑕᐅᓂᕐᒧᑦ, ᐃᖕᒥᒍᖓᔪᓂᒃ ᑕᐅᑐᒋᐊᖅᑐᕐᕕᐅᖃᑦᑕᖅᓯᑎᒃ ᓯᕗᓪᓕᐅᓂᖅᓴᓂᒃ ᖁᓚᐅᑕᐅᓂᖕᒋᓐᓂ ᐊᒻᒪᓗ ᑭᖑᓂᐊᒍᑦ ᖃᖓᑕᕝᕕᐅᕋᓂᓯᒪᓕᖅᑎᓪᓗᒋᑦ ᖃᐅᔨᓴᕐᕕᖕᓄᑦ ᖃᖓᑕᓲᕐᓄᑦ. ᐊᑐᓂ ᐱᖓᓱᑦ ᖃᖓᑕᓲᑦ ᖃᐅᔨᓴᕈᑕᐅᔪᑦ ᐃᓚᖃᓚᐅᖅᑐᑦ ᑕᐅᑐᕋᓐᓈᖅᑎᐅᑎᑕᐅᔪᓂᒃ ᓯᑕᒪᓂᒃ, ᐊᑐᓂ ᑕᐅᑐᕋᓐᓈᕆᐊᖃᖅᑐᖅ ᑎᒃᑯᐊᖅᑕᐅᓯᒪᖃᑦᑕᖅᓱᓂ ᑕᐅᑐᒡᕕᒋᔭᕆᐊᖃᕐᓂᐊᖅᑕᖕᒋᓐᓂᒃ ᖁᓚᐅᑦᑎᓂᖕᒋᓐᓂ ᐊᒻᒪᓗ ᖄᖕᒋᖅᓯᒪᓕᕐᓂᖕᒋᓐᓂᒃ. ᒪᕐᕉᒃ ᑕᐅᑐᕋᓐᓈᖅᑏᒃ ᐃᓂᖃᖅᑎᑕᐅᓚᐅᖅᑑᒃ ᑕᐃᑲᓂᑦᓴᐃᓐᓇ ᐃᒡᓗᖕᒐᖓᓂ ᖃᖓᑕᓲᑦ ᐃᓗᐊᓂ ᐊᒻᒪᓗ ᐊᓯᖕᒋᓐᓂᒃ ᑐᓴᖅᓴᐅᔪᖃᕈᓐᓇᖕᒋᑦᑐᓂᒃ ᑕᐃᒫᒃ ᐃᖕᒥᒍᖓᔪᓐᓇᑦᑎᐊᕐᓂᐊᕐᒪᑕ ᖃᐅᔨᓴᖕᒋᓐᓂᒃ. ᑕᒪᕐᒥᒃ ᑕᐃᒃᑯᐊ ᐱᖓᓱᔪᑦ ᐃᓚᖃᓚᐅᖅᑐᑦ ᐃᓚᓐᓂᐊᖅᑎᑕᐅᓯᒪᑦᑎᐊᖅᑐᓂᒃ ᐃᓄᖕᒥᒃ ᑕᐅᑐᕋᓐᓇᖅᑎᐅᔪᓐᓇᖅᑐᒥᒃ, ᐊᒻᒪᓗ ᖃᐅᔨᓴᖅᑕᐅᒫᖓᒥᒃ ᖃᓂᒋᔭᖕᒋᓐᓂ ᓄᓇᓕᖕᓄᑦ, ᐃᓚᐅᕐᑯᔭᐅᖃᑦᑕᓚᐅᕐᒥᔪᑦ ᓄᓇᓕᖕᓂ ᐊᖑᓇᓱᒃᑏᑦ. ᑕᒪᐃᓐᓂᒃ, ᐃᓚᐃᑦ ᑎᒥᕐᑯᖕᒋᑦ ᐃᓚᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᖕᒋᓐᓂᒃ ᐸᕐᓇᐃᓂᕐᒧᓪᓗ ᐊᒻᒪᓗ ᐋᕿᐅᒪᔭᐅᓚᖓᓂᖕᒋᓐᓄᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ.



*ᐊᕕᒃᑐᖅᓯᒪᔪᓂᒃ 2. a.) ᓄᓇᖑᐊᖅ ᐃᒪᐃᓪᓗ ᐸᕐᓇᒃᑕᐅᓯᒪᔪᑦ ᖃᐅᔨᓴᕕᒃᓴᐅᓂᖏᓐᓂᒃ (ᑐᖑᔪᖅᑐᓖᑦ ᐊᕙᓗᖏᑦ), ᐊᕕᒃᑐᖅᓯᒪᔪᑦ ᓇᐅᒃᑯᕐᕕᒃᓴᖏᑦ (ᐊᐅᐸᓗᒃᑐᑦ), ᐊᒻᒪᓗ ᑲᖏᖅᓱᓂᖏᓐᓂᒃ ᖃᐅᔨᒪᔾᔪᑕᐅᓂᖏᑦ (ᐊᐅᐸᒃᓗᑐᓂᒃ ᑕᖅᓴᖃᖅᑐᑦ). **AI**: ᓴᓐᓂᕈᑎᐅᑉ ᑐᓄᓂᕈᓯᐅᓪᓗ ᐃᒪᓂᖓᓂ **BF:** ᑲᐊᐅᒪᓐ ᑲᖏᖅᓱᐊᓂ. **BS:** ᑐᕕᒐᔪᖕᒥ **CS:** ᐸᓂᖅᑑᑉ ᐃᑭᖓᓂ. **EB**: ᑲᓇᖕᓇᖓᓂ ᕿᑭᖅᑕᓘᑉ. **ES:** ᑕᓯᐅᔭᖅ ᐃᓐᓈᓗᒃ ᑲᖏᖅᓱᐊᔪᖓᓂ. **FBN:** ᓴᓂᕋᔭᖕᒥᐅᑦ ᓱᑯᓱᓚᕐᒥᐅᓪᓗ ᑕᓇᐅᖓᓂ. **FBS:** ᓴᓂᕋᔭᖕᒥᐅᑦ ᓱᑯᓱᓚᕐᒥᐅᓪᓗ ᑕᓇᐅᖓᑕ ᓂᒋᖅᐸᓯᐊᓂ. **GB:** ᕿᑎᖅᒥᐅᓂ ᐃᑭᕋᓴᐅᑉ ᐃᒪᖓ/ᐃᑐᐊᖅᑐᕐᕕᖕᒥ. **JS:** ᐊᐅᓱᐃᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖓᓂ. **LS:** ᑕᓪᓗᕈᑎᐅᑉ ᐃᑭᕋᓴᖓ. **NB:** ᐊᐅᓱᐃᑑᑉ ᐃᑎᕕᐊᑕ ᑕᓇᐅᖓ; **PRI:** ᑰᓚᓇᑉ ᕿᑭᖅᑕᖓᑕ ᑲᖏᖅᑐᖓᓂ. **PS:** ᐱᐅᓪ–ᖑᓂᕋᖅᑕᐅᔫᑉ ᖃᓗᓈᑎᑐᑦ ᑕᓇᐅᖓᓂ– Peel Sound–ᒥ. **SS**: ᐊᑯᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖅ. ᓄᓇᓖᑦ (ᕿᕐᓂᖅᑐᕐ): 1. ᐅᖅᓱᖅᑑᖅ; 2. ᑕᓗᕐᔪᐊᕐ; 3. ᑰᓚᕐᔪᒃ; 4. ᓇᐅᔭᕐ; 5. ᓴᓂᕋᔭᒃ; 6. ᐃᓚᓗᓕᒃ; 7. ᐃᖃᓗᐃᕐ; 8. ᐸᓐᓂᖅᑑᖅ; 9. ᕿᑭᖅᑕᕐᔪᐊᖅ; 10. ᑲᖏᖅᑐᒫᐱᒃ; 11. ᒥᕐᑎᒪᑕᓕᒃ; 12. ᐃᒃᐱᐊᕐᔪᒃ; 13. ᖃᐅᓱᐃᑐᖅ; 14. ᐊᐅᓱᐃᑐᖅ; 15. ᖃᓈᖅ (ᐊᑯᑦᑐᐃᓪᓗᖃᓕᓪᓗ ᓄᓇᖓᑦ). b.) ᐃᖏᒍᕐᒥᔪᖅ : ᑕᓯᐅᔭᖅ ᐃᓐᓈᓗᒃ ᑲᖏᖅᓱᐊᕐᔪᐊᖓᓂ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓂᖏᑦ (ᐊᕙᓗᔭᐅᓯᒪᔪᖅ).*

ᑕᐅᑐᕋᓈᖃᑕᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᓂᐱᓕᐅᕆᖃᑦᑕᓚᐅᖅᑐᑦ ᑕᑯᔭᒥᓂᒃ ᑎᒍᒥᐊᖅᑕᖏᓐᓄᑦ ᓂᐱᓕᐅᕈᑎᓄᑦ ᐅᖃᖃᑦᑕᖅᓱᑎᒃ ᖃᔅᓯᒧᐊᖅᑎᑦᓗᒋᑦ ᑲᑎᖓᐅᖅᑐᑦ ᑐᒐᓕᑦ ᓯᕗᑦᓕᖅᐸᒥᒃ ᑕᑯᔭᐅᓚᐅᕐᒪᖔᒐᑕ ᐊᒻᒪᓗ ᖃᔅᓯᒧᐊᖅᑎᑦᓗᒍ ᖃᐅᔨᓴᐅᑦ ᑕᐃᒃᑯᐊ ᐊᑕᐅᓯᐅᖏᑦᑐᑦ ᐊᕙᓗᐊᓃᓕᖅᑎᑦᓗᒋ5 ᖃᖓᑕᓱᕐᒥᓐᓂᖏᓐᓂ ᑕᑯᔭᐅᖃᑕᓚᐅᕐᒪᖔᒐᑕ. ᐊᓯᑲᓐᓂᖏᓐᓂᒃ ᖃᐅᔨᔭᐅᖃᑦᑕᓚᐅᖅᑐᓂᒃ ᓂᐱᓕᐅᕆᖃᑦᑕᓚᐅᕐᒥᔪᑦ ᒪᑯᓂᖓ ᓯᕗᑦᓕᐅᑎᑦᑎᖃᑦᑕᖅᓱᑎᒃ:

1) ᐊᒥᓲᓂᖏᑦ ᑐᒫᓖᑦ ᕿᓚᓗᒐᐃᑦ ᑲᑎᖓᐅᖅᑐᑦ (ᐊᑕᐅᓯᕐᒦᑦᑐᑦ, ᑐᑭᖃᖅᑕᐅᓪᓗᑎᒃ ᒪᕿᓗᑎᒃ ᐅᖓᑕᓖᓪᓗᑎᒡᓗᓐᓖᑦ ᑎᒥᖓᑕ ᑕᑭᔫᑎᒋᓂᖓᓂᒃ ᖃᓂᒌᖕᓂᖃᖅᑐᓂᒃ ᐃᖏᓄᑦ ᑕᐃᒃᑯᖓᓴᐃᓐᓇᕐᓗ ᐃᖏᕐᕋᖃᑕᐅᓪᓗᑎᒃ,

2) ᓴᓂᒧᑦᓗ ᑐᑭᒧᑦᓗ ᓴᓐᓂᖓᔫᖕᓂᒃ ᐅᖓᓯᖕᓂᖅᑲᖅᑎᒋᓂᖏᑦ ᑕᑯᔭᐅᕕᖏᓐᓂ; ᐊᒻᒪᓗ

3) ᐊᓯᖏᓐᓂᒃ ᐊᔾᔨᒌᖏᓐᓂᖏᓐᓂᒃ (ᓇᒧᑦ ᐃᖏᕋᓂᖏᓐᓂᒃ, ᐱᑕᖃᕐᓂᖏᑦ ᐱᐊᕋᖏᑦ, ᑐᒐᖃᕐᓂᖏᑦᓗ).

ᐃᓂᒋᔭᖏᑦ ᐊᒻᒪᓗ ᖁᓚᐅᑦᑎᓯᒪᑎᒋᓂᖓ ᖃᖓᑕᓲᖅ ᓂᐱᓕᐅᖅᑕᐅᕙᓪᓕᐊᖏᓐᓇᓚᐅᖅᑐᖅ ᒪᕿᑕᒫᒃ ᓯᑲᓐᓯᐅᓂᕌᖅᑕᐅᔫᖕᓂᒃ ᐊᓂᒍᖅᑐᓂᒃ ᖃᐅᔨᓴᐅᑎᒃᑯᑦ.

ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᓂᒃ ᑐᑭᓯᔭᐅᓚᐅᖅᑐᑦ

ᐅᖓᓯᒋᖕᓂᖏᑦ ᐆᒃᑐᕋᐅᑕᐅᓚᐅᖅᑐᑦ ᓇᓚᐅᑖᖅᑕᐅᓂᖏᓐᓄᑦ ᐊᒥᓱᑎᒋᓂᖏᑦ ᑐᒐᓛᑦ ᐃᓗᐊᓂ ᖃᐅᔨᓴᕐᕕᐅᓂᕐᒥ. ᑕᐃᒃᑯᐊ ᐊᑐᖅᑕᐅᓚᐅᖅᑐᑦ ᐃᓱᒪᓇᕐᒪᑕ ᐱᑕᖃᕐᓂᐊᖅᑐᔾᔭᕐᓂᖏᓐᓂᒃ ᖃᐅᔨᕕᐅᔪᓐᓇᕐᓂᖅ ᐱᑕᖃᕐᓂᖏᓐᓂᒃ ᑐᒐᓕᖕᓂᒃ ᐅᖓᓯᒋᖕᓂᖃᖅᑎᑕᐅᔪᑦ ᐊᑯᓐᓂᖏᓐᓂ. ᑭᓯᐊᓂᑕᐅᖅ, ᑕᐅᑐᖃᑦᑕᓚᐅᖅᑐᑦ ᑐᖓᐅᑦᑎᔪᓐᓇᕐᒥᖕᒪᑕ ᑐᒐᓕᖕᓂᒃ ᐱᑕᖃᖅᑐᓂᒃ ᐳᐃᔪᓂᒃ. ᑕᐃᒪᐃᓐᓄᖓᓄᑦ, ᑕᐅᑐᒃᑕᐅᔪᓐᓇᕐᓂᖏᓐᓂᒃ ᐊᖑᔭᐅᖏᑦᑐᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔭᕆᐊᖃᕐᒪᑕ (Marsh and Sinclair 1989). ᓇᓗᓇᐃᒃᑯᑦᑎᖅᑕᐅᓂᖏᑦ ᐱᔭᐅᒃᑲᓐᓂᖃᑦᑕᖅᓱᑎᒃ ᐊᑐᖅᑕᐅᓚᐅᕐᒥᔪᑦ ᐊᔾᔨᒌᒃᑐᓂᒃ ᑕᑯᔭᐅᔪᖃᕐᖓᑦ ᒪᕿᖕᓄᑦ ᑕᐅᑐᕋᓐᓈᖅᑎᑕᐅᖃᑕᐅᔪᖕᓄᑦ ᑕᐃᑲᓂᑦᓴᐃᓐᓇᖅ ᑭᖑᓕᓈᒃᑐᓃᓐᓂᖏᓐᓂᒃ ᖃᖓᑕᓲᑉ ᐃᓗᐊᓂ, ᓇᓚᐅᑖᖅᑕᐅᔪᒪᓪᓗᑎᒃ ᖃᓄᖅ ᑕᑯᔭᐅᑲᓐᓂᕈᓐᓇᓲᖑᖓᒪᖔᑕ ᑕᐃᒃᑯᐊᓴᐃᓐᓇᐃᑦ (Laake and Borchers 2004). ᐃᓕᑕᓇᔭᐅᓂᖏᑦ ᑕᐃᒃᑯᓂᖓᑦᓴᐃᓐᓇᖅ ᑕᑯᒃᑲᓐᓂᖃᑦᑕᕐᓂᖏᑦ ᓇᓗᓇᖃᑦᑕᕐᒪᑕ ᐊᒻᒪᓗ ᐊᑐᖅᑕᐅᒐᔪᖏᑦᑐᓂᒃ ᖃᐅᔨᒪᔪᑎᒃᓴᖃᖅᑎᑦᑎᓕᓚᐅᖅᑐᑦ ᐊᑕᐅᓲᖅᑕᐅᔪᓂᒃ ᐊᒻᒪ ᐅᖓᑕᓃᒃ ᑕᑯᔭᐅᖃᑦᑕᓚᐅᕐᓂᖏᓐᓂᒃ ᑕᐃᔅᓱᒪᓂ 2013–ᒥ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᓂ (Pike and Doniol-Valcroze 2015). ᓯᕗᓂᐊᒍᑦ ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᐊᑐᖃᑦᑕᓚᐅᖅᓱᑎᒃ ᖃᓄᐃᑦᑐᑐᐃᓐᓇᕐᓂᒃ ᐊᑐᕈᒪᔭᖏᓐᓂᒃ ᐊᒻᒪᓗ ᐃᓱᒪᖅᓲᑕᐅᓗᑎᒃ ᑭᒡᓕᖃᖅᑎᑕᐅᓂᖏᑦ ᑕᐃᒃᑯᓂᖓ ᐱᓕᕆᔪᓂᒃ, ᑕᐃᒃᑯᐊ ᖃᐅᔨᓴᕈᓲᑦ ᐊᑐᖅᑕᐅᓚᐅᖅᑐᑦ ᑖᒃᑯᓇᓂ ᑐᑭᓯᓂᐊᖅᑕᐅᔪᓂ ᑐᖓᕕᖃᓚᐅᖅᑐᑦ ᓯᑕᒪᓂᒃ ᖃᐅᔨᓴᕈᓂᑎᒃ ᐊᔾᔨᒌᖏᓐᓂᖏᓐᓂᒃ ᖃᐅᔨᒪᔪᑎᓂᒃ.

ᖃᐅᔨᔭᐅᔾᔪᑎᖃᓚᐅᖅᑐᑦ ᖃᕆᑕᐅᔭᒃᑯᑦ ᐊᑐᖅᑕᐅᓪᓗᑎᒃ ᓴᓂᖓᔪᓕᖕᓂᒃ ᐅᖓᓯᒌᖕᓂᖃᖅᑎᑕᐅᕙᓚᐅᖅᑐᑦ ᑕᒪᐃᓐᓂᒃ ᑕᑯᔭᐅᖃᑦᑕᓚᐅᖅᑐᓂᒃ (ᐊᔾᔨᒌᒃᑐᐃᓐᓇᐅᓂᖏᑦ ᐆᔭᖅᑕᐅᖃᑦᑕᖅᓱᑎᒃ ᑕᑯᔭᐅᓂᖏᑦ ᑕᐃᒃᑯᐊᓴᐃᓐᓇᐃᑦ) ᑕᒪᐃᓐᓂᑦᑎᐊᖅ ᖃᐅᔨᒪᔪᑎᓕᐊᖑᕙᓚᐅᖅᑐᓂ. ᑕᐃᒃᑯᐊ ᖃᕆᑕᐅᔭᒃᑯᑦ ᖃᐅᔨᒪᔪᑕᐅᕙᒃᑐᑦ ᑕᐃᔭᐅᔪᑦ ᐊᑲᐃᑭᒥᒃ ᐊᑐᖅᑕᐅᓚᐅᖅᑐᑦ ᓂᕈᐊᖅᑕᐅᓂᖏᓐᓄᑦ ᐱᐅᓂᖅᐹᖑᓇᔭᖅᑐᑦ ᑕᒪᒃᑯᓂᖓ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᖃᐅᔨᓴᕈᑕᐅᓂᐊᖅᑐᑦ (Buckland et al. 2001) ᐊᒻᒪᓗ ᐃᓚᒋᔭᐅᓂᖏᑦ ᑕᒪᒃᑯᐊ ᐊᔾᔨᒌᖏᑦᑑᑎᐅᔪᓂᒃ ᐊᕙᑎᖃᕐᓂᖏᓐᓂᒃ (Marques et al. 2007) ᐱᔾᔪᑕᐅᓂᖏᓐᓂᒃ ᓯᑯᖃᖅᑎᒋᓂᖏᑦ, ᓄᕕᔭᑎᒋᕙᖕᓂᖏᑦ, ᑕᓇᐅᕐᒥ ᑕᕐᕋᖃᖅᑎᒋᓂᖏᑦ ᐊᒻᒪᓗ ᓯᕐᑯᓂᖅ ᖃᐅᔨᒪᓂᖃᕐᓂᖓᓂᒃ ᑕᓇᐅᑯᑦ.

ᑕᐃᒃᑯᓂᖓᓕ ᑲᖏᖅᓱᓂᖏᓐᓂᒃ ᖃᐅᔨᒪᔪᑎᒃᓴᓂᒃ, ᐊᒥᓱᓂᖏᓐᓂᒃ ᐊᒻᒪᓗ ᐱᑕᖃᖅᑎᒋᓂᖏᑦ ᓇᓚᐅᑖᖅᑕᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᐊᑐᖃᑦᑕᖅᓱᑎᒃ ᐅᖓᓯᒌᖕᓂᖃᖅᑎᑕᐅᔪᓂᒃ ᓇᓗᓇᐃᒃᑯᑕᓇᔭᐅᔪᓂᒃ (Doniol-Valcroze et al. 2015a). ᐊᒥᓱᓂᖏᑦ ᑐᒐᓕᑦ ᑕᑯᔭᐅᔪᓐᓇᕐᓂᖏᑦ ᐊᕕᒃᑐᖅᓯᒪᓂᖏᓐᓂᒃ ᐊᑐᓂ ᑲᖏᖅᑑᓂᖏᓐᓂᒃ ᒪᓕᓚᐅᖅᑐᑦ ᐊᑐᖅᓱᑎᒃ ᑕᐃᔭᐅᔪᓂᒃ ᑕᒪᒃᑭᖅᑐᓂᒃ ᐃᓚᖃᒃᑲᓐᓂᖅᑐᓂᒃ ᐃᔾᔪᐊᖅᓯᔾᔪᑎᖃᖅᑐᓂᒃ. ᐊᔾᔨᒌᖏᓐᓂᖃᖅᐸᓚᐅᕐᒪᑕ ᓱᕐᓗ ᒪᑯᓂᖓ ᐃᔾᔪᐊᖅᑕᐅᓯᒪᖃᓯᐅᔭᐅᕙᓚᐅᖅᑐᓂᒃ ᐅᖓᓯᖕᓂᖏᓐᓂᒃ ᓯᒡᔭᒥᒃ ᐊᒻᒪᓗ ᐅᖓᓯᖕᓂᒃ ᐹᖓᓂᒃ ᑲᖏᖅᓱᒃ. ᐱᐅᓂᐹᖑᓂᖏᑦ ᐃᔾᔪᐊᖅᑕᐅᓯᒪᔪᓐᓇᕐᓂᖏᑦ ᑲᖏᖅᓱᖏᓐᓂᒃ ᓂᕈᐊᖅᑕᐅᓚᐅᖅᑐᑦ ᐱᔾᔪᑕᐅᓪᓗᑎᒃ ᐱᓂᖅᐹᓂᒃ ᑕᐃᒪᐃᓐᓂᐊᖅᑐᔾᔭᕐᓂᖏᓐᓂᒃ ᐊᑐᖅᑕᐅᓪᓪᓗᑎᒡᓗ ᓇᓚᐅᑖᕈᑕᐅᔪᓐᓇᕐᓂᖅ ᓇᓚᐅᑦᑖᑦᑎᐊᕐᓂᖅᓴᐅᔪᓐᓇᕐᓂᕐᒧᑦ ᐱᑕᖃᕈᓐᓇᕐᓂᖏᓐᓂᒃ ᑐᒐᓕᑦ ᑕᒪᐃᓐᓂᑦᑎᐊᖅ ᐃᓗᓐᓇᖓᓂᒃ ᑲᖏᖅᓱᒃ. ᐱᑕᖃᖅᑎᒋᓂᖏᑦ ᓈᓴᖅᑕᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᐊᑐᖅᑕᐅᓪᓗᑎᒃ ᐊᕕᒃᑐᖅᑕᐅᖃᑦᑕᕐᓂᖏᑦ ᐱᑕᖃᕐᓂᖏᑦ ᑕᒪᐃᓐᓂᒃ ᑲᖏᖅᓱᓕᒫᑦ ᐊᖏᓂᓕᒫᖓᓂ. ᑕᒪᕐᒥᒃ ᑲᑎᑦᓗᒋᑦ ᐱᑕᖃᕐᓂᖏᑦ ᑕᒪᐃᓐᓂᒃ ᑲᖏᖅᓱᓂᖏᓐᓂᒃ ᖃᕆᑕᐅᔭᒃᑯᑦ ᓈᓴᖅᑕᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᐊᑐᖅᓱᑎᒃ ᐱᑕᖃᔪᖕᓂᖏᓐᓂᒃ ᑕᒪᐃᓐᓂᑦᑎᐊᖅ ᖃᖏᖅᓱᓂᒃ ᐊᑐᓂ ᐊᕕᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᐊᒥᓱᐃᖅᑕᖅᑕᐅᓯᒪᑎᒋᓪᓗᑎᒃ ᑕᒪᐃᓐᓂᒃ ᑲᑎᑕᐅᓪᓗᑎᒃ ᐊᓂᖏᑦ ᑲᖏᖅᓱᓕᒫᑦ, ᖃᐅᔨᒪᔭᐅᓕᖅᑐᓂ.

ᑐᒐᓕᑦ ᐳᐃᓯᒪᕝᕕᖕᒥᖃᑦᑕᓚᐅᖏᑦᑐᑦ ᐃᒪᐅᑉ ᖄᖓᓂ ᖃᐅᔨᓴᖅᑕᐅᓕᖅᑎᓪᓗᒋᑦ ᑕᑯᔭᐅᔪᓐᓇᖃᑦᑕᓚᐅᖅᑐᑦ ᑕᐅᑐᕋᓐᓈᖅᑎᐅᔪᓄᑦ, ᐱᑕᖃᕐᓂᖏᓐᓂᒃ ᑕᐃᒪᐃᓐᓂᐊᖅᑐᔾᔭᓇᔭᐅᑐᐃᓐᓇᓚᐅᖅᑐᑦ (Marsh and Sinclair 1989). ᑕᒪᐃᖃᑦᑕᕐᓂᖏᓐᓂᒃ ᐊᒥᓱᒐᓴᐃᑦ ᑐᒐᓕᑦ ᓈᓴᖅᑕᐅᓯᒪᓚᐅᖅᑐᑦ ᖃᐅᔨᕕᐅᔪᖅᑐᖅᑐᑦ ᐊᕐᕿᒋᐊᖅᑕᐅᔭᓇᔭᐅᖅᑐᑦ ᐱᑕᖃᕐᓂᖏᑦ ᑕᒪᐃᓐᓂᒃ ᑲᖏᖅᓱᓂᖏᓐᓂᒃ ᖃᓇᑕᐅᔭᒃᑯᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᒃ ᐊᕐᕿᒋᐊᖅᑕᐅᔭᓇᔭᐅᖅᑐᑦ ᐊᑐᖅᑕᐅᓂᖏᓐᓂᒃ ᐊᕐᕿᒋᐊᖅᑕᐅᔭᓇᔭᐅᖅᑐᑦ ᐱᑕᖃᕐᓂᖏᑦ ᑕᒪᐃᓐᓂᒃ ᑲᖏᖅᓱᓂᒃ ᐊᑐᓂ ᐊᕕᒃᑐᖅᓯᒪᓂᖏᓐᓂ, ᐊᒥᓱᐃᖅᑕᖅᑕᐅᓯᒪᑎᒋᓪᓗᑎᒃ ᑕᒪᐃᓐᓂᒃ ᑲᑎᑕᐅᓪᓗᑎᒃ ᐊᓂᖏᑦ ᑲᖏᖅᓱᓕᒫᑦ, ᖃᐅᔨᒪᔭᐅᓕᖅᑐᓂ.

ᑕᑯᒃᓴᐅᑦᑎᐊᕐᓇᖕᒋᑦᑎᓪᓗᒍ ᐃᓱᒪᒋᔭᐅᑐᐃᓐᓇᖃᑦᑕᓚᐅᖅᑐᑦ ᑐᒐᓛᑦ ᑕᑯᒃᓴᐅᔪᓐᓇᕋᔭᕐᓂᖕᒋᑦ ᐊᑕᐅᓲᕐᓂᒃᒥ 1 ᒦᑕᒥᒃ ᖃᖓᓂᒃ ᐅᖓᓯᖕᓂᓛᑦ. ᑐᖓᕕᐅᓪᓗᑎᒃ ᖃᐅᔨᔭᐅᓚᐅᖅᑐᑦ 24-ᖑᓚᐅᖅᑐᓂᒃ ᑐᒐᓕᖕᓂ ᐃᓕᓯᕝᕕᐅᓯᒪᓚᐅᖅᑐᓂᒃ ᖁᒻᒧᐊᒃᑎᑕᐅᓯᒪᔪᑎᒍᑦ ᐃᓕᑕᕆᔭᐅᔾᔪᓂᒃ ᖃᓂᒋᔭᖕᒋᓐᓂ ᓄᓇᓖᑦ ᐃᒃᐱᐊᖁᔪᖕᒥᓗ ᒥᑦᑎᒪᑕᓕᖕᒥ ᐋᒐᓯᑕᒪᖅ ᐋᒐᓯᒥᒃ 2009–ᒥᒃ 2013–ᒧᑦ, ᑕᐃᒃᑯᐊ ᑐᒐᓛᑦ ᐊᑯᓂᐅᓂᖃᖅᑎᒋᔪᓂᒃ ᐃᒪᓐᓇᑎᒋ 31.4 ± 1.1% ᐳᓴᓐᑎᓂᒃ ᑕᒫᓂᕋᔭᒃᐸᓚᐅᖅᑐᑦ ᐳᐃᓯᒪᕝᕕᖕᒐᓂᒃ ᖃᓂᓐᓂᖃᖅᑎᒋᔪᒥᒃ ᒪᕐᕉᖕᓂᒃ 2 ᒥᑖᓂᒃ ᖃᖓᓂᒃ ᐃᒪᐅᑉ, ᐊᒻᒪᓗ ᐃᒪᓐᓇᑎᒋ 20.4 ± 0.8% ᐊᑕᓲᓐᓇᕐᒥᒃ 1 ᒦᑕᒥᒃ ᐅᖓᓯᖕᓂᓕᖕᒥᒃ ᐳᐃᓯᒪᕝᕕᐅᑉ ᐃᒪᐅᑉ ᖃᖓᓂ. (Watt et al. 2015).

ᐃᓚᖓᐃᕝᕕᐅᓯᒪᔪᓐᓇᕐᓂᖕᒋᓐᓂᒃ ᐃᓱᒪᒋᔭᐅᓗᑎᒃ 7(PBR–ᖑᓂᕋᑕᖅᐅᔪᓂᒃ) ᐱᐅᓯᕆᔭᐅᓪᓗᑎᒃ (Wade 1998), ᐋᕐᒋᐊᖅᑕᐅᖃᑦᑕᓚᐅᕐᒥᔪᑦ ᑕᐃᒃᑯᓂᖓ ᐃᓚᖃᖅᓱᑎᒃ ᐊᖑᓇᓱᒃᑕᐅᓯᒪᔫᖓᓗᐊᓂᒃ ᔭᒐᐃᔭᐅᓯᒪᔪᓂᒃ (ᓲᕐᓗ ᐆᒪᔪᐃᑦ ᐱᑕᖅᑕᐅᓯᒪᒐᓗᐊᖅᓱᑎᒃ ᔭᒐᐃᔭᐅᔪᑦ), ᐊᑐᖅᑕᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᓈᓴᖅᑕᐅᓂᖕᒋᓐᓄᑦ ᐊᑐᓕᖁᔭᓕᐊᑦ ᑲᑎᓪᓗᒋᑦ ᑕᒪᕐᒥᒃ ᓄᓈᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᐱᑕᖅᑕᐅᓗᑎᒃ:

$$\text{ᑲᑎᓗᒋᑦ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖕᒋᑦ } TALC = \frac{\text{ᐃᓚᖓᐃᕝᕕᐅᓯᒪᖕᓂᖕᒋᑦ } PBR}{\text{ᐊᖑᓇᓱᒃᑕᐅᓯᒪᔪᑦᔭᒐᐃᔭᐅᓯᒪᓂᖕᒋᑦ } LRC}$$

ᖃᖓᑐᐃᓐᓇ ᐃᒪᐃᓕᖓᓂᖕᒋᓐᓂ,

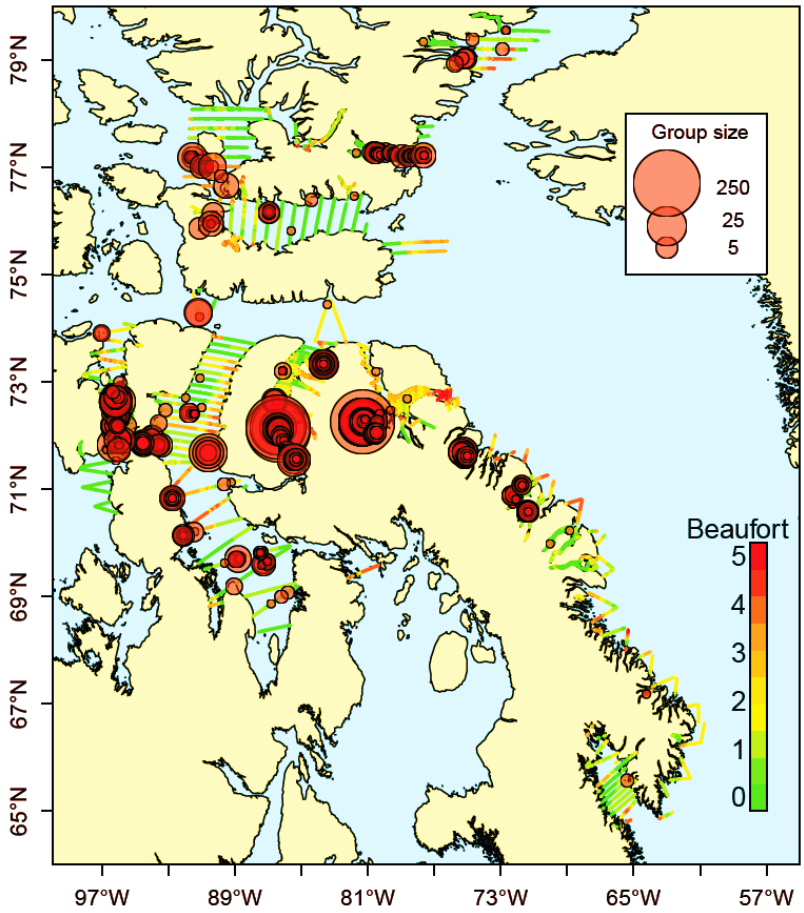
$$PBR \text{ ᐃᓚᖓᐃᕝᕕᐅᓯᒪᓂᖕᒋᑦ} = 0.5 \times R_{\text{ᐊᒥᓲᓂᖅᐸᓂᒃ}} \times N_{\text{ᐊᒥᓲᖕᒋᓐᓂᖅᐸᓂᒃ}} \times F_r$$

ᐊᖑᓇᓱᒃᑕᐅᓯᒪᔪᓂᒃ ᔭᒐᐃᔭᐅᓂᖕᒋᑦ ᐋᕐᒋᐊᖅᑕᐅᓯᒪᓂᑦ (LRC-ᖕᒋᑦ) ᓇᓕᒧᑏᓚᐅᖅᑕᖕᒋᑦ ᐃᒪᓐᓇᑎᒋ 1.28 (ᐊᑐᖅᑕᐅᖕᒋᓐᓇᖅᐸᒃᑐᒥᒃ ᑕᒻᒪᖅᓯᒪᑎᒋᔪᓐᓇᖅᓱᑎᒃᒃ, SE=0.15, Richard 2008). $R_{\text{ᐊᒥᓲᓂᖅᐸᖑᓂᖕᒋᑦ}}$ ᐊᖕᒋᓂᖅᐹᖑᓂᖕᒋᑦ ᐊᒥᓱᕈᓇᐊᖅᑕᐅᔪᓐᓇᕐᓂᖕᒋᑦ ᐆᒪᔪᐃᑦ ᐋᕐᑭᒃᑕᐅᓯᒪᓚᐅᖅᑐᑦ ᐃᒫᓐᓇᑎᒋ 0.04 (ᐊᑐᖅᑕᐅᖕᒋᓐᓇᖅᑐᓂᒃ ᑕᓇᐅᕐᒥᐅᑕᓄᑦ ᓈᓴᐅᑎᖃᖅᑎᑕᐅᑕᐅᓲᑦ ᖃᐅᔨᒪᔭᐅᖕᒋᑦᑎᓪᓗᒋᑦ, Wade 1998). $N_{\text{ᒥᑭᓂᖅᐹᖑᑎᑕᐅᓂᖕᒐ}}$ ᐋᕐᑭᐅᒪᔭᐅᔪᖅ 20–ᒋᔭᐅᔪᒥᒃ ᐳᓴᓐᑎᖃᕐᓂᖕᒐᓂᒃ ᒪᓕᒃᑐᓂᒃ ᖃᓄᐃᖕᒋᑎᓪᓗᒋᑦ ᓇᓃᒐᔪᖕᓂᖕᒋᓐᓂᒃ ᓇᓗᓇᐃᒃᑯᑕᓖᑦ N–ᖓᓃᑦᑐᓂᒃ. ᐊᒥᓱᕈᖅᐸ7ᓕᐊᑎᒋᓂᖕᒋᓐᓄᑦ ᑐᒐᓛᑦ ᓇᓗᓇᐃᒃᑯᑕᖃᖅᑐᑦ (F_r)–ᒥᒃ ᐋᕐᑭᐅᒪᔭᐅᓚᐅᖅᑐᖅ ᐃᒪᓐᓇᑎᒋ 0.5 ᑕᐅᕙᓂ ᐊᐅᓯᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖕᒋᓃᑦᑐᓂᒃ ᐊᒻᒪᓗ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖓᓃᑦᑐᓂᒃ ᑐᒐᓛᑦ (ᓈᓴᖅᑕᐅᖅᑕᐅᓗᑎᒃ ᓇᓗᓇᕐᓂᖕᒋᑦ ᐃᒪᕐᒥ ᖃᓄᐃᓕᖓᓂᖕᒋᑦ ᐊᒻᒪᓗ ᑐᒐᓛᑦ ᓇᒧᑦ ᓅᑉᐸᓪᓕᐊᓂᖕᒋᑦ) ᐊᒻᒪᓗ ᓈᓴᐅᑎᖃᖅᑎᑕᐅᓂᖕᒋᑦ 1.0–ᒥᒃ ᐊᓯᖕᒋᓐᓂᒃ ᑐᒐᓕᒃᑕᖃᕐᓂᖕᒋᓐᓂ ᐃᒪᕐᓂ (ᐊᑐᖅᑕᐅᒐᔪᖕᓂᖓᓄᑦ ᑕᒪᓐᓇ ᓇᓴᐅᑦ ᐊᑐᖅᑕᐅᕙᒃᑲᒥ ᐃᓱᒪᒋᔭᐅᔪᓄᑦ ᐱᑕᖃᕐᓂᖅᓴᐅᔪᓂ ᐃᒪᕐᓂᒃ).

ᑐᑭᓯᔭᐅᓯᒪᓕᖅᑐᑦ

ᑐᕙᐃᖓᓕᖃᑦᑕᕐᓂᖕᒋᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᖃᐅᔨᓴᕐᕕᐅᓂᖕᒋᓐᓂᒃ ᐃᒪᕐᓂ ᐊᐅᔭᒃᑯᑦ 2013–ᒥ ᐱᔾᔪᑕᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᖃᖓ ᐊᒻᒪᓗ ᖃᓄᑎᒋ ᖃᐅᔨᓴᕐᕕᐅᔪᓐᓇᖃᑦᑕᓚᐅᕐᒪᖔᑕ ᑑᒐᓛᑦ. ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒋᑦ, ᑕᒪᕐᒥᒃ ᑐᒐᓛᑦ ᐃᒪᖕᒋᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᐃᓐᓇᐅᓚᐅᖅᑐᑦ, ᐱᖕᒋᑕᑯᐊᕆᓪᓗᒍ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᕐᒥᑦᑐᓂ. ᓄᓇᕐᔪᐊᕐᒥ ᐱᑕᖃᕐᔪᖕᒪᑕ ᐊᒥᓲᑎᒋᓂᖕᒋᑦ ᑲᑎᖓᔪᓂᒃ ᐃᒪᓐᓇᐃᓕᖓᔪᒥᒃ 2.76 (ᐋᕐᑭᒋᐊᖅᑕᐅᓯᒪᓗᑎᒃ CV 3.8%), ᐊᒻᒪᓗ ᑕᐃᒪᓐᓂᒃ ᖃᐅᔨᒪᔭᐅᓂᖕᒋᑦ ᑲᑎᖓᐅᕐᓂᖕᒋᑦ ᐊᔾᔨᒋᖕᒋᓐᓂᖃᖅᑎᒋᕙᓚᐅᖅᑐᑦ ᐊᒥᓲᓂᖕᒋᑦ ᐃᒪᓐᓇᑎᒋ 1 ᐊᑕᐅᓯᕐᒥᒃ 3.08–ᖑᔪᓄᑦ. ᐊᕕᒃᑐᖅᓯᒪᔪᓂ ᑕᑯᑎᑦᑎᔾᔪᑎᓂᒃ 3–ᒦᑦᑐᑦ ᑕᑯᒃᓴᐅᑎᑦᑎᕗᑦ ᓇᓃᖃᑕᓚᐅᕐᓂᖕᒋᓐᓂᒃ ᐊᑐᓂ ᑕᑯᔭᐅᕝᕕᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᑐᒐᓕᒐᓴᖓᓂᒃ. ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᑦ ᐱᑕᖃᖅᑎᒋᓂᖕᒋᑦ ᐊᑐᓂ ᐃᒪᕐᓂ ᐱᑕᖃᕐᕕᐅᔪᓂ ᑕᑯᒃᓴᐅᔪᑦ ᑕᑯᑎᑦᑎᔾᔪᑎᓂᒃ ᐃᒥᓈᖅᑎᖅᓯᒪᔪᓂ ᓯᕗᓪᓕᕐᒥ 1–ᒥ. ᑕᒪᕐᒥᒃ ᑲᑎᓪᓗᒋᑦ ᐋᕐᑭᒋᐊᖅᑕᐅᓚᐅᕐᓂᖕᒋᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᑦ ᑲᓇᑕᒥᐅᑕᐃᑦ ᖁᑦᑎᒃᑐᒥ ᑐᒐᓕᒃᑕᖃᕐᓂᖕᒋᑦ ᐋᕐᑭᒃᑕᐅᓚᐅᖅᑐᑦ 141,909–ᓂᒃ ᕿᓚᓗᒐᕐᓂᒃ ᑐᒐᓕᖕᓂᒃ (ᐃᓚᖃᖅᓱᑎᒃ 7,038–ᓂᒃ ᑐᒐᓕᖕᓂᒃ ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᓂᒃ ᑲᖕᒋᖅᓱᖕᒋᓐᓂᒃ). ᐊᑐᖅᑕᐅᓂᖕᒋᑦ ᐋᕐᑭᒋᐊᕈᑎᐅᑕᐅᓂᕐᒧᑦ ᐱᔾᔪᑕᐅᔪᑦ ᐋᕐᑭᐅᒪᔭᐅᓚᐅᖅᑐᑦ ᐃᒪᓐᓇᑎᒋ ᓇᓕᒧᓈᖅᑕᐅᓯᒪᔪᒥᒃ 2.94 (ᐋᕐᑭᒋᐊᖅᑕᐅᓯᒪᓪᓗᑎᒃ CV 3.4%). ᑕᒪᓐᓇ ᓈᓴᐅᑎᖓ, ᑐᖓᕕᖃᖅᑐᖅ ᐊᑐᓕᖁᔭᐅᓯᒪᔪᒥᒃ ᒫᓐᓇᑲᐅᑎᒋ ᐋᕐᑭᒋᐊᕈᑎᖃᖅᑎᑕᐅᔪᓂᒃ 3.18–ᒦᑦᑐᓂᒃ, ᑐᕌᖓᔪᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᕝᕕᖕᓂ ᐃᒪᕐᓂᒃ ᑕᑯᒃᓴᐅᓇᑦᑎᐊᖅᑐ ᒪᕐᕐᓗᑯᐃᓐᓇᐅᖕᒋᑦᑐᓂᒃ (Watt et al. 2015) ᐊᒻᒪᓗ ᐊᑐᖅᑕᐅᓚᐅᖅᓱᑎᒃ ᑕᐃᒃᑯᓄᖓ ᑕᑯᔭᐅᒪᔪᓚᐅᕐᓂᖕᒋᓐᓄᑦ ᖃᐅᔨᓴᐅᑦ ᐊᐅᕙᓚᓪᓕᐊᓂᖓ ᓴᒃᓐᓯᒃᑯᑦ ᒪᓕᒃᓱᒍᑦ ᓈᓂᑕᒫᖅ 4.3 ᓴᒃᓐᓯᑦ. ᑕᐃᒃᑯᓇᖓᑦ ᐱᑕᖃᖅᑎᒋᓂᖕᒋᓐᓂᒃ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᓂᒃ, ᑲᑎᓪᓗᒋ7 ᑕᐃᒪᓂ ᑕᒪᕐᒥᒃ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖕᒋᑦ ᑐᒐᓛᑦ ᓴᓐᓂᕈᑎᐅᑉ ᐃᒪᖓᓂᒃ ᐋᕐᑭᒃᑕᐅᓯᒪᓕᖅᑐᖅ 1,540–ᓄᑦ ᕿᓚᓗᒐᕐᓄᑦ ᑐᒐᓕᖕᓄᑦ. ᑕᐃᒃᑯᐊ ᑕᒪᕐᒥᒃ ᑲᑎᑕᐅᓪᓗᑎᒃ

ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖏᑦ ᐊᐅᔭᑕᒫᑦ ᑐᒐᓕᒃᑕᖅᑲᓕᖅᑎᓪᓗᒋᑦ ᐅᖃᐅᓯᐅᓯᒪᔪᑦ ᑕᑯᑎᑦᑎᔾᔪᑎᒃᓴᓂᒃ ᐃᖏᓃᖅᑎᖅᓯᒪᔪᓂᒃ ᑕᑯᑎᑦᑎᔾᔪᑎᓂᒃ 2-ᒥ.



ᑕᑯᑎᑦᑎᔾᔪᑦ 3. ᐊᔾᔨᐅᖏᑦᑐᒻᒪᕆᑦ ᑕᑯᔭᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᑐᒐᓕᒃᑕᖃᕐᓂᖏᑦ ᑕᐃᑲᓂ 2013–ᒥ ᖁᑦᑎᒃᑐᕐᒥᐅᑕᓂ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐃᒪᕐᒥᐅᑕᖃᕐᓂᖏᓐᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ (ᐊᐅᐸᓗᒃᑐᓂᒃ ᐊᖑᓗᖅᑐᓕᕐ). ᑐᑭᒧᐊᒃᑐᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᔪᑦ ᑕᑯᒃᓴᐅᑎᑦᑎᔪᑦ ᐊᕕᒃᑐᖅᓯᒪᓂᖏᓐᓂᒃ ᑕᖅᓴᖃᖅᓱᑎᒃ ᑕᒫᓂ ᐊᓄᓇᖃᖅᑎᒋᓂᖏᓐᓂᒃ ᖃᐅᔨᒪᔾᔪᑎᖏᑦ ᑎᑎᕋᖅᑕᐅᓯᒪᓪᓗᑎᒃ.

ᐃᖏᒍᖕᒐᔪᓂᒃ 1. ᖃᐅᔨᓴᕐᕕᐅᓚᐅᖅᑐᑦ, ᖃᐅᔨᓴᕐᕕᐅᓚᐅᖅᑐᑦ ᖃᓄᐃᓕᖕᒐᓂᖏᑦ, ᑐᒐᓖᑦ ᑕᑯᔭᐅᖃᑦᑕᓚᐅᕐᓂᖏᑦ (ᐃᒪᐅ ᖄᖕᒐᒍᑦ ᐱᑕᖃᕐᓂᖏᑦ) ᐊᒻᒪᓗ ᐋᕿᒋᐊᖅᑕᐅᓯᒪᓪᓗᑎᒃ ᐊᒥᓲᓂᖏᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᑦ ᐊᐅᔭᒃᑯᑦ ᐱᑕᖃᕐᓂᖏᓐᓂᒃ. ᐋᕿᒋᐊᖅᑕᐅᓯᒪᓂᖏᓐᓄᑦ ᓈᓴᐅᑏᑦ ᐊᑐᖅᑕᐅᓚᐅᑐᑦ 2.94 (ᐋᕿᒋᐊᖅᓯᒪᓕᖅᑎᓪᓗᒋᑦ 3.4% ᐳᓴᓐᑎᖏᓃᑦᑐᑦ), ᐱᖏᑕᑐᐊᕆᓪᓗᒋ9 ᑲᓇᖕᓇᓯᐊᓂ ᕿᑭᖅᑖᔅᐸ ᑕᕆᐅᖕᒐᓂ, ᐊᑐᖅᑕᐅᓚᐅᕐᒪᑕ ᓈᓴᐅᑎᖏᑦ ᐃᒪᓐᓇᑎᒋ 4.53 (CV 3.8% ᐳᓇᓐᑎᖏᓃᓚᐅᖅᑐᑦ).

ᐱᑕᖃᕐᓂᖏᑦ /ᖃᐅᔨᓴᕐᕕᐅᔪᑦ	ᐊᖏᓂᖏᑦ (km ᑭᓚᒦᑕᑎᒍᑦ²)	ᐳᓴᓐᑎᒃᑯᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᑦ	ᖃᖕᒐᓂ ᐃᒪᐅᑉ ᐱᑕᖃᕐᓂᖏᑦ ᐊᒥᓲᓂᖏᑦ	ᐊᒥᓲᓂᖏᑦ (ᐋᕿᒋᐊᖅᑕᐅᓗᑎᒃ)	ᐋᕿᒋᐊᖅᑕᐅᓯᒪᓗᑎᒃ
ᐊᐅᓯᐃᑦᑑᑉ ᕿᑭᖅᑕᖕᒐᑕ ᓂᒋᐊᓂ ᐃᒪᖕᒐ	35,357	13%	4,316	12,694	0.33
ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖕᒥᐅᓪᓗ ᐊᑯᓐᓂᖕᒐᓂ ᑕᓯᐅᔭᕐᔪᐊᖅ	40,669	4%	5,563	16,360	0.65
ᑰᒐᓇᔫᑉ ᑲᓇᖕᓇᖕᒐᓂ	115,309	9%	16,921	49,768	0.20
ᓴᓐᓂᕈᑎᐅᑉ ᑐᓄᓂᕈᓯᐅᓪᓗ ᐃᒪᖕᒐ	9,419	26%	11,915	35,043	0.42
ᑕᓯᐅᔭᖅ ᐃᓐᓈᓗᒃ ᑲᖏᖅᓱᐊᕐᔪᖕᒥ	8,459	26%	3,566	10,489	0.24
ᑲᓇᖕᓇᖕᒐᓂ ᕿᑭᖅᑖᔅᐸ ᑕᕆᐅᖕᒐᓂ	53,510	8%	3,799	17,555	0.35
ᑲᑎᖕᒐᓪᓗᑎᒃ ᓴᓐᓂᕈᑎᐅᑉ ᑐᓄᓂᕈᓯᐅᓪᓗ ᐃᒪᖕᒐ ᐊᒻᒪᓗ ᑕᓯᐅᔭᖅ ᐃᓐᓈᓗᒃ ᑲᖏᖅᓱᐊᕐᔪᖕᒥ	17,878	26%	15,481	45,532	0.33

*ᑕᑯᑎᑦᑎᔾᔪᑦ ᐃᖏᒧᑦᖠᓯᔪᓂᒃ 2. ᑕᒪᕐᒥᒃ ᑲᑎᑦᓗᒋᑦ ᓄᓈᖅᑕᐅᓂᕐᒧᑦ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖏᑦ ᐱᖓᓱᔪᖅᑐᓂᒃ 6-ᖑᔪᓂᒃ ᑐᒫᓕᒃᑕᕐᑲᕐᕕᐅᕙᒃᑐᓂᒃ ᑲᓇᑕᒥᐅᑕᐃᑦ ᖁᑦᑎᒃᑐᒥᒃ ᐅᑭᐅᖅᑕᖅᑑᓂᖓᓂ. ᐊᒥᓱᕈᖅᓯᐊᕆᔭᐅᓂᖏᓐᓄᑦ (ᖃᓗᓇᑎᑐᑦ ᓇᓗᓇᐃᒃᑯᑕᓖᑦ ᐃᒫᒃ Fr) ᐋᖅᑭᒃᑕᐅᓯᒪᓚᐅᖅᑐᑦ ᓈᓴᐅᑎᓕᖏᒃ 0.5 ᑕᐅᕙᓂ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖏᓐᓂ ᐊᒻᒪᓗ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖏᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖓᓂ, ᐃᓱᒪᒋᔭᐅᓯᒪᔭᕆᐊᖃᕐᓂᖏᓐᓄᑦ ᓇᓗᓇᕐᓂᖏᑦ ᐱᑕᖃᕐᓂᖏᑦ ᑕᐃᒃᑯᓇᓂ ᐃᒪᕐᓂ ᐊᒻᒪᓗ ᓇᒧᑦ ᓅᑉᐸᓪᓕᐊᕙᖕᓂᖏᓐᓂᒃ ᑐᒫᓖᑦ. ᐊᒥᓱᕈᖅᓯᐊᕆᔭᐅᓂᖏᓐᓄᑦ ᓇᓗᓇᐃᒃᑯᑕᖓᑦ (Fr–ᖓᑦ) ᐋᖅᑭᒃᑕᐅᓯᒪᓚᐅᖅᑐᖅ 1.0–ᒥ ᐊᓯᖏᓐᓄᑦ ᑐᒫᓕᒃᑕᕐᑲᕐᕕᐅᔪᓄᑦ ᐃᓱᒪᒋᔭᐅᓪᓗᑎᒃ ᓈᒻᒪᖕᓂᐊᕐᓂᖅ ᐊᒥᓲᓂᖅᓴᐅᔪᓄᑦ ᖃᐅᔨᒪᑦᑎᐊᕐᓂᖅᓴᐅᔪᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᕐᑲᑦᑕᖅᓯᒪᓂᖏᓐᓄᑦ.

ᐊᐅᔭᒃᑯᑦ ᑐᒫᓕᖕᓂᒃ ᐱᑕᖃᓲᑦ	$N_{ᐊᒥᓱᕈᓕᕐᒐᓂᖏ}$	ᑲᑎᑦᓗᒋᑦ ᑕᒪᕐᒥᒃ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖏᑦ
ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖓ (ᐊᒥᓱᕈᖅᓯᐊᕆᔭᐅᓂᖏᑦ/Fr=0.5)	9,714	76
ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖏᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖅ (ᐊᒥᓱᕈᖅᓯᐊᕆᔭᐅᓂᖏᑦ/Fr=0.5)	9,897	77
ᑰᖓᓇᔫᑉ ᑲᓇᖕᓇᖓᓂ	42,081	658
ᓴᓐᓂᕈᑎᐅᑉ ᑐᓄᓂᕈᓯᐅᓪᓗ ᐃᒪᖓ	24,895	389
ᑕᓯᐅᔭᖅ ᐃᓐᓈᓗᒃ ᑲᖏᖅᓱᐊᕐᔪᖕᒥ	8,564	134
ᑲᓇᖕᓇᖓᓂ ᕿᑭᖅᑖᓘᑉ ᑕᕆᐅᖓᓂ	13,214	206
ᑕᒪᕐᒥᒃ ᖁᓛᓃᑦᑐᑦ ᑲᑎᑦᓗᒋᑦ	108,365	1,540
ᑲᑎᖓᓪᓗᑎᒃ ᓴᓐᓂᕈᑎᐅᑉ ᑐᓄᓂᕈᓯᐅᓪᓗ ᐃᒪᖓ ᐊᒻᒪᓗ ᑕᓯᐅᔭᖅ ᐃᓐᓈᓗᒃ ᑲᖏᖅᓱᐊᕐᔪᖕᒥ	34,716	542

ᓇᐅᒃᑯᑦ ᓇᓗᓇᕈᑎᖃᕐᓂᖏᑦ

- ᑕᒻᒪᖅᑕᖅᓯᒪᖏᑦᑐᓂᒃ ᐊᒥᓱᓂᖏᓐᓂᒃ ᓇᓚᐅᑦᑖᖅᑐᖃᕐᓂᐊᖅᑎᓪᓗᒋᑦ ᑕᒪᕐᒥᑦᑎᐊᖅ ᐱᑕᖃᕐᕕᐅᓂᖏᑦ ᖃᐅᔨᓴᖅᑕᖃᑦᑕᕆᐊᖃᖅᐳᑦ (Buckland et al. 2001). ᐊᐅᔭᒃᑯᑦ ᐱᑕᖃᖅᐸᓂᖏᑦ ᑐᒫᓖᑦ ᕿᓚᓗᒐᐃᑦ ᑕᒃᐸᓂ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖏᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᕐᒥ ᐊᒻᒪᓗ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖓᓂ ᒫᓐᓇᐅᔪᖅ ᓱᓕ ᑐᑭᓯᐅᒪᔭᐅᑦᑎᐊᖏᒻᒪᑕ. ᑕᐅᕙᓂᓕ ᑰᖓᓇᔫᑉ ᑲᓇᖕᓇᖓᓂ ᐱᔾᔪᑎᖃᖅᓱᑕ ᐃᓱᒪᓕᐅᓚᐅᖅᑐᑦ ᖃᐅᔨᓴᕈᓚᖏᔾᔪᑦᑎ ᐱᖓᓇᒻᒪᕆᐊᓃᑦᑐᑦ ᐊᒻᒪᓗ ᓂᒋᒻᒪᕆᐊᓂᑦᑐᑦ ᐱᑕᖃᕐᕕᐅᔪᓐᓇᕐᓂᖏᑦ. ᐃᓱᒪᖃᓚᐅᕋᑦᑕ ᑕᒪᒃᑯᐊ ᐊᑐᖅᑕᐅᖃᑕᕐᓂᖏᓐᓂᒃ ᑐᒪᐃᖓᓕᖅᑎᓪᓗᒋᑦ ᐱᓗᐊᖅᑐᒥᒃ ᑕᐅᕙᓂ ᐱᐅᓪ ᐃᒪᕕᖓᓂ Peel Sound–ᒥ ᐊᒻᒪᓗ ᑰᖓᓇᑉ ᕿᑭᖅᑕᖓᑕ ᑲᖏᖅᑐᖓᓂ. ᑐᒫᓖᑦ ᕿᓚᓗᒐᐃᑦᑕᐅᖅ ᐱᑕᖃᓲᖑᖕᒥᖕᒪᑕ ᐃᒪᕐᓂ ᐊᖑᓇᓱᒃᕕᐅᕙᖕᒋᒻᒥᔪᓂ ᐊᒻᒪᓗ ᓯᓚᑖᓃᑦᑐᓂᒃ ᖃᐅᔨᓴᕐᕕᐅᓚᐅᖅᑐᓂᒃ (ᓲᕐᓗ ᐆᒃᑑᑎᒋᓗᒍ ᑕᐅᕙᓂ ᒪᕐᕉᓕᕿᐅᑉ ᐊᑭᐊᓂ ᑕᕆᐅᕐᒥ Parry Channel–ᒥᒃ ᐊᕕᒃᑐᖅᓯᒪᓂᖓᓂ). ᑭᓯᐊᓂᓕᑕᐅᖅ, ᐃᓱᒪᒋᔭᐅᑐᐃᓐᓇᖅᐳᑦ ᐊᒥᓲᓗᐊᖃᑦᑕᖏᓐᓂᖏᓐᓂᒃ, ᐊᒃᑐᖅᓯᓯᒪᓇᔭᖏᒃᑭᓪᓗᑎᒃ ᓄᓇᓕᖕᒥᐅᑕᓄᑦ ᑕᒪᐃᓐᓂᒃ ᑲᑎᑦᓗᒋᑦ ᐱᑕᖅᑕᐅᔪᓐᓇᕐᓂᖏᓐᓂᒃ.
- ᑐᒫᓕᑦ ᑕᑯᔭᐅᖃᑦᑕᖅᓯᒪᓂᖏᑦ ᑲᖓᔪᒻᒪᕆᐊᖃᑦᑕᓚᐅᖅᑐᑦ ᑕᐅᕙᓂ ᑕᓯᐅᔭᐅᑉ ᐃᓐᓈᓗᒃ ᑲᖏᖅᓱᐊᕐᔪᖕᒐᓂ ᐊᒻᒪᓗ ᓴᓐᓂᕈᑎᐅᑉ ᑐᓄᓂᕈᓯᐅᓪᓗ ᐃᒪᖓᓂ, ᓇᓗᓇᕈᑕᐅᒋᐊᒃᑲᓐᓂᓕᓚᐅᖅᑐᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᓂᖏᓐᓂᒃ ᐊᒥᓲᔪᒥᓇᕐᓂᖏᓐᓂᑦ, ᐊᒻᒪᓗ ᑐᖓᐅᑎᓯᒪᔪᑕᐅᔪᓐᓇᖅᓱᑎᒃ ᐊᒥᓲᓂᖏᓐᓄᑦ.
- ᑲᑎᓐᖓᑎᑕᐅᒐᓗᐊᕐᒪᑕ ᑲᑎᓐᖓᔪᑦ ᐅᒪᔪᖅᑕᐅᔪᓐᓇᖅᑐᑦ ᓄᓈᖅᑕᐅᓗᑎᒃ ᐃᓗᐊᓂ AI ᐊᒻᒪᓗ ES, ᑖᒃᑯᐊᒃ ᐊᒃᑐᐊᖃᓂᑏᖕᓂᖏᑦ ᐊᒡᒍᖅᑐᓯᒪᔪᒃ ᓱᓕ ᖃᐅᔨᒪᔭᐅᖏᒻᒪᑎᒃ. ᓱᓕ ᓄᑖᓂᒃ ᕿᒥᕐᕈᓇᒍᑎᓂᒃ ᓇᓗᓇᐃᖅᓯᔾᔪᑎᖃᓚᐅᖏᒻᒪᑕ ᓄᑖᓂᒃ ᐋᖅᑭᒃᓯᒪᓂᖃᕋᓗᐊᕐᒪᖔᑕ. ᓯᕗᓂᒃᓴᒥ ᖃᐅᔨᓴᖅᑕᐅᔭᕆᐊᖃᕐᓂᐊᖃᖅᑐᑦ ᖃᐅᔨᓴᐃᓗᑎᒃ ᐊᒃᑐᐊᖃᑎᒌᖕᒪᖔᑎᒃ ᑖᒃᑯᐊ ᒪᕐᕉᒃ ᐊᒻᒪ ᐱᓗᐊᖅᑐᒥᒃ ᐱᕙᓪᓕᐊᑎᑦᑎᔨᑦ ᐊᖅᑯᓲᖅᑕᕐᓂᖏᑦ ᐊᒻᒪ ᐅᒥᐊᔪᐊᑦ ᐊᖅᑯᓲᖅᑐᑦ ᐅᓄᖅᓯᕙᓪᓕᐊᓂᖏᓐᓄᑦ.

- ᑕᐅᕙᓂᓕ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖓᓂ, ᐊᒥᓱᐊᓘᖅᑕᕐᒪᑕ ᕿᓚᓗᒐᐃᑦ ᑐᒐᓖᑦ ᖃᐅᔨᓴᐅᓚᐅᖅᑐᑦ ᑕᐅᕙᓂ ᐊᐅᓱᐃᑦᑑᑉ ᐃᑎᕕᐊᑕ ᑕᕆᐅᖓᓂ. ᐊᒥᓲᖏᑦᑐᑯᓗᐃᓪᓗ ᑕᑯᔭᐅᖃᑦᑕᓚᐅᖅᑐᑦ ᖃᐅᔨᓴᕐᕕᐅᓂᖓᓂ ᑕᐅᕙᓂ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖏᓐᓂ ᐃᖏᒍᑦ, ᑕᐅᕙᓂᓗ ᐊᖑᓇᓱᒐᔪᖕᓂᖅᓴᐅᕙᒃᓱᑎᒃ ᖃᓂᓐᓂᖅᓴᐅᒐᒥ ᓄᓇᖓᓄᑦ ᐊᐅᓱᐃᑦᑐᕐᒥᐅᑦ.
- ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖏᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖓ ᖃᐅᔨᓴᖅᑕᐅᔪᓐᓇᓚᐅᖏᑦᑐᖅ ᓯᓚᓗᐊᖅᑕᓚᐅᕐᓂᕐᒧᑦ. ᐱᑕᖃᕐᓂᖏᑦ ᓇᓚᐅᑦᑖᖅᑕᐅᓯᒪᔪᑦ ᑐᖓᕕᖃᖅᑐᑦ ᐊᒥᓱᖏᑦᑑᒐᓗᐊᓂᒃ ᒪᓕᒐᒃᓴᓕᐊᖑᓯᒪᔪᓂᒃ ᐅᐊᖕᓇᖅᐸᓯᖓᓂ ᖃᐅᔨᓴᕐᕕᐅᓂᖓᓂ, ᑕᐃᒪᐃᓐᓂᖏᓄᓪᓗ ᖃᐅᔨᒪᔭᐅᖃᓯᐅᔭᐅᔪᓐᓇᖏᓚᖅ ᖃᐅᔨᓴᕐᕕᐅᓚᐅᖅᑐᓕᒫᓄᑦ. ᑭᓯᐊᓂᓕ, ᐱᑕᖃᖅᑎᒋᓂᖏᑦ ᐃᓚᔭᐅᓯᒪᑐᐃᓐᓇᖅᑐᑦ ᖃᐅᔨᓴᕐᕕᐅᒐᓱᐊᖅᓯᒪᓂᖏᓐᓄᑦ. ᑕᐃᒫᒃ ᓇᓚᐅᑦᑖᖅᑕᐅᔪᓐᓇᖅᓯᓚᐅᖅᑐᑦ ᓱᓕᔫᓂᖅᓴᐅᔪᓐᓇᑐᓂᒃ, ᑭᓯᐊᓂᑕᐅᖅ ᓱᓕ ᐃᓱᒪᒋᔭᐅᔭᕆᐊᖃᖅᑐᖅ ᒥᑭᓛᖑᔪᒥᒃ ᓇᓚᐅᑖᑕᐅᓯᒪᓂᖏᓐᓂ ᐱᑕᖃᕐᓂᖏᓐᓂᒃ ᕿᓚᓗᒐᐃᑦ ᑐᒐᓖᑦ ᑕᐅᕙᓂ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖏᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖅᒥ. ᓂᕆᐅᒃᑐᒍᑦ ᑖᒃᑯᐊ ᐱᑕᖃᕐᓂᖏᑦ ᐃᒪᐃᑦ ᐊᕕᒃᑐᖅᑕᐅᓯᒪᒃᑲᓐᓂᓚᖓᓂᖏᓐᓂᒃ ᖃᐅᔨᒪᔭᐅᑦᑎᐊᕐᓂᖅᓴᐅᓕᕈᑎᒃ ᓇᒧᖓᐅᖃᑕᕐᓂᖏᓐᓂᒃ ᓇᑭᖓᖃᑦᑕᕐᓂᖏᓪᓗ. ᑕᐃᒃᑯᓴᐃᓐᓇᐅᔪᓐᓇᕐᓂᖏᑦ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖏᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᖅᒥ, ᑕᐃᒃᑯᐊᓗ ᓯᑕᒪᐃᑦ ᐃᓕᑕᕆᔭᐅᓯᒪᔪᑦ ᓴᓐᓂᕈᑎᐅᑉ ᐃᒪᖓᓂ ᐱᑕᖃᕐᕕᐅᔪᑦ ᑐᒐᓖᖅᓂᒃ ᐊᒻᒪᓗ ᑲᖏᖅᓱᕐᔪᐊᕐᒥ, ᖃᓈᑉ ᐊᑭᐊᓂ ᑕᕆᐅᕐᒥ ᐱᑕᖃᖅᑎᒋᓂᖏᑦᑕᐅᖅ ᓇᓗᓇᖅᑐᑦ ᓱᓕ.
- ᑕᐃᒃᑯᐊ ᑕᑯᔭᐅᖃᑦᑕᓚᐅᕐᓂᖏᑦ ᓯᕗᓂᐊᒍᕐᓂᖏᓐᓂ ᐊᒻᒪᓗ ᑭᖑᓂᐊᒎᕐᓂᖏᑦ ᑕᐅᑐᕋᓈᖅᑎᓄᑦ ᐊᒥᓱᓗᐊᖃᑕᓚᐅᖏᒻᒪᑕ, ᑕᐃᒪᐃᓐᓂᖏᓄᓪᓗ ᐊᒥᓱᒥᓇᖏᔾᔪᑕᐅᕙᑦ ᐊᖏᔪᒥᒃᓗ ᑕᒃᕗᓇ ᑕᒻᒪᖅᓯᒪᔪᒥᓇᕐᓂᖃᖅᐳᑦ. ᖃᐅᔨᓴᖅᑕᐅᒪᓚᐅᖅᑐᓂᒃ ᐊᒥᓲᖏᓐᓂᖏᑦ ᓴᕿᑦᑎᓗᑕᐅᓂᐊᖅᑐᒃᓴᐅᔪᑦ ᐊᒥᓱᓂᖅᓴᐅᔪᓂᒃ ᐱᑕᖃᕐᓂᕋᐃᓂᖅ ᓴᓂᐊᓂ ᑕᐃᒃᑯᓇᖓᑦ ᐊᒥᓱᓂᒃ ᑕᑯᔭᐅᕝᕕᐅᓇᔭᖅᑐᓂᒃ ᖃᓄᐃᓕᖓᓇᓱᒋᔭᐅᔪᓂᒃ. ᐱᔾᔪᑕᐅᓗᑎᒃ ᑕᐃᒃᑯᓂᖓᑦᓴᐃᓐᓇᖅ ᑕᑯᖃᑦᑕᓚᐅᕐᓂᖏᑦ ᐊᑯᓐᓂᖏᓐᓂᒃ ᑕᐅᑐᕋᓐᓈᖅᑎᐅᓚᐅᖅᑐᓂᒃ ᐊᒥᓲᓗᐊᖅᑐᔾᔪᐅᖏᑦᑐᑦ, ᑖᒃᑯᓇᖓᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᓂᒃ, ᑕᐃᒪᐃᓐᓂᖏᓐᓄᑦ ᐊᒥᓱᓈᖅᑕᐅᓗᐊᖅᓯᒪᔪᓐᓇᕆᕗᑦ.

ᑐᑭᑖᕈᑏᑦ ᐃᓱᐊᓂ

ᖃᐅᔨᓴᖅᑕᐅᓂᖏᓐᓂᒃ ᑐᓂᔭᐅᓯᒪᔪᑦ ᒫᓐᓇᐅᔪᖅ ᐱᑕᖃᖅᑎᒋᓂᖏᓐᓂᒃ ᓇᓚᐅᑦᑖᕈᑎᖏᑦ ᓯᑕᒪᓂᒃ ᓴᓐᓂᕈᑎᐅᑉ ᐃᒪᖏᓐᓂ ᐊᕕᒃᑐᖅᓯᒪᔪᓂᒃ ᑐᒐᓖᑦ ᑲᓇᑕᒥᐅᑕᐃᑦ ᐃᒪᖁᑎᖏᓐᓂ ᓴᕿᐅᒪᑎᑦᑎᕗᑦ ᐱᐅᓂᖅᓴᐅᓕᖅᑐᓂᒃ ᓱᓕᔫᔪᓐᓇᕐᓂᖏᓐᓂᒃ, ᐊᒻᒪᓗ ᓴᕿᑦᑎᓗᑕᐅᓯᒪᓪᓗᑎᒃ ᐃᓚᓐᖓᐃᕝᕕᐅᖃᑕᕐᓂᖏᓐᓂᒃ ᐃᓱᒪᒋᔭᐅᓯᒪᔪᓂᒃ ᓇᓚᐅᑦᑖᕈᑎᓂᒃ ᑕᐃᒃᑯᓂᖓ ᑐᒐᓖᖅᓂᒃ ᑕᐅᕙᓂ ᐃᒪᕐᓂ ᐊᑯᑭᒃᑐᕐᒥᐅᑦ ᕿᑭᖅᑖᓗᖏᐅᓪᓗ ᐊᑯᓐᓂᖓᓂ ᑕᓯᐅᔭᕐᔪᐊᕐᒥᓗ ᐊᒻᒪᓗ ᐊᐅᓱᐃᑦᑑᑉ ᕿᑭᖅᑕᖓᑕ ᓂᒋᐊᓂ ᐃᒪᖏᓐᓂ. ᑭᖑᓂᐊᒍᑦ, ᐊᑯᓂᐅᔪᖅ ᐅᖓᓯᒃᑐᒥᒃ ᖃᐅᔨᓴᖅᑕᐅᔪᓐᓇᕐᓂᖏᑦ ᐊᖅᑲᑲᑦᑕᕐᓂᖏᓐᓂᒃ ᐃᒪᕐᒥ ᐱᐅᓯᕆᕙᒃᑕᖏᑦ ᐱᑕᖃᕆᐊᖃᒻᒪᕆᓚᐅᖅᑐᑦ ᓇᓚᐅᑦᑖᕈᑕᐅᔪᓐᓇᕐᓂᕐᒧᑦ ᐱᑕᖃᖅᑎᖏᓂᖏᓐᓂᒃ ᖃᐅᐅᒪᔪᓐᓇᕐᓂᕐᒧᑦ. ᐊᒥᓱᓂᖏᓐᓂᒃ ᓇᓚᐅᑦᑖᕈᑏᑦᑕᐅᖅ ᐱᐅᓯᒋᐊᖅᑕᐅᓚᐅᕐᒥᔪᑦ ᐊᑐᓕᖅᑎᑕᐅᓂᖏᓐᓄᑦ ᓄᑖᑦ ᖃᐅᔨᓴᕈᓯᑦ ᖃᓄᐃᓕᐅᑕᐅᓂᕐᒧᑦ ᐊᒃᓱᕈᕐᓇᕈᑕᐅᕙᓚᐅᖅᑐᓂᒃ ᑐᒐᓖᖅᓂᒃ ᑲᒪᒋᔭᖃᕐᓂᖅ ᑲᖏᖅᓱᓃᖃᑦᑕᓚᐅᖅᑐᓂᒃ.

ᑐᑭᓯᓂᐊᕐᕕᐅᓯᒪᔪᑦ

ᖃᐅᔨᓴᖅᑎᓄᑦ ᐅᖃᐅᔾᔨᒋᐊᕈᑏᑦ ᐅᓂᒃᑳᓕᐊᑦ ᓴᕿᑎᑕᐅᓯᒪᔪᑦ ᐊᒃᑑᐱᕆ 20-24, 2014–ᒥ ᐊᕐᕋᒍᑕᒫᖅ ᑲᑎᒪᔪᐊᓚᐅᕐᓂᖏᓐᓂ ᑲᓇᑕᓕᒫᒥ ᑕᕆᐅᕐᒥᐅᑕᓕᕆᔨᐅᖃᑕᐅᔪᑦ ᕿᒥᕐᕈᐊᖅᑎᐅᓂᖏᓐᓄᑦ ᑲᑎᒪᔨᕋᓛᑦ (NMMPRC). ᐊᓯᒃᑲᓐᓂᖏᑦ ᐅᖃᓕᒫᒐᓕᐊᑦ ᑕᐃᒃᑯᓇᖓᑦ ᑲᑎᒪᓂᕕᓂᖏᓐᓂᒃ ᑕᑯᔭᒃᓴᐅᖏᔪᑦ ᐅᕙᓂ DFO Science Advisory Schedule ᐊᑐᐃᓐᓇᕈᖅᐸᓪᓕᐊᓂᖓᓐᓂ.

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